Supplementary Materials

Appendix A. List of reviewed articles

Allen, P. M., Mejía, S. T., & Hooker, K. (2015). Personality, self-perceptions, and daily variability in perceived usefulness among older adults. *Psychology and Aging*, *30*(3), 534–543.

Baez, L. M., Puccetti, N. A., Stamatis, C. A., Jaso, B. A., Timpano, K. R., & Heller, A. S. (2022). Identifying Real-World Affective Correlates of Cognitive Risk Factors for Internalizing Disorders. *Emotion*, *23*(3), 678–687.

Barber, S. J., Hamel, K., Ketcham, C., Lui, K., & Taylor-Ketcham, N. (2020). The effects of stereotype threat on older adults' walking performance as a function of task difficulty and resource evaluations. *Psychology and Aging*, *35*(2), 250–266.

Battaglini, A. M., Rnic, K., Jameson, T., Jopling, E., & Lemoult, J. (2023). Supplemental Material for Interpersonal Emotion Regulation Flexibility: Effects on Affect in Daily Life. *Emotion*, *23*(4), 1048–1060.

Baucom, B. R., Saxbe, D. E., Ramos, M. C., Spies, L. A., Iturralde, E., Duman, S., & Margolin, G. (2012). Correlates and characteristics of adolescents' encoded emotional arousal during family conflict. *Emotion*, *12*(6), 1281–1291.

Bernstein, E. E., Curtiss, J. E., Wu, G. W. Y., Barreira, P. J., & McNally, R. J. (2019). Exercise and emotion dynamics: An experience sampling study. *Emotion*, *19*(4), 637–644.

Bielak, A. A. M., Hultsch, D. F., Strauss, E., MacDonald, S. W. S., & Hunter, M. A. (2010). Intraindividual variability is related to cognitive change in older adults: Evidence for within-person coupling. *Psychology and Aging*, *25*(3), 575–586.

Blanke, E. S., Brose, A., Kalokerinos, E. K., Erbas, Y., Riediger, M., & Kuppens, P. (2020). Mix it to fix it: Emotion regulation variability in daily life. *Emotion*, *20*(3), 473–485.

Brose, A., De Roover, K., Ceulemans, E., & Kuppens, P. (2015). Older adults' affective experiences across 100 days are less variable and less complex than younger adults'. *Psychology and Aging*, *30*(1), 194–208.

Brose, A., Scheibe, S., & Schmiedek, F. (2013). Life contexts make a difference: Emotional stability in younger and older adults. *Psychology and Aging*, *28*(1), 148–159.

Brose, A., Schmiedek, F., Lövdén, M., & Lindenberger, U. (2012). Daily variability in working memory is coupled with negative affect: The role of attention and motivation. *Emotion*, *12*(3), 605–617.

Brownlow, B. N., Cheavens, J. S., Vasey, M. W., Thayer, J. F., & Hill, L. B. K. (2023). Culturally Compelled Coping and Depressive Symptoms in Black Americans: Examining the Role of Psychophysiological Regulatory Capacity. *Emotion*, *24*(4), 1003–1015.

Causer, J., Holmes, P. S., Smith, N. C., & Williams, A. M. (2011). Anxiety, Movement Kinematics, and Visual Attention in Elite-Level Performers. *Emotion*, *11*(3), 595–602.

Chen, M. A., Suchting, R., Thayer, J. F., & Fagundes, C. P. (2023). Resilience to Stress Across the Lifespan: Childhood Maltreatment, Heart Rate Variability, and Bereavement. *Psychology and Aging*, *38*(3), 247–262.

Chester, D. S., Clark, M. A., & DeWall, C. N. (2021). The flux, pulse, and spin of aggression-related affect. *Emotion*, *21*(3), 513–525.

Coifman, K. G., Kane, M. J., Bishop, M., Matt, L. M., Nylocks, K. M., & Aurora, P. (2021). Predicting negative affect variability and spontaneous emotion regulation: Can working memory span tasks estimate emotion regulatory capacity? *Emotion*, *21*(2), 297–314.

Das, D., Tan, X., Bielak, A. A. M., Cherbuin, N., Easteal, S., & Anstey, K. J. (2014). Cognitive ability, intraindividual variability, and common genetic variants of Catechol-O-Methyltransferase and Brain-Derived Neurotrophic Factor: A longitudinal study in a population-based sample of older adults. *Psychology and Aging*, *29*(2), 393–403.

Dawel, A., Gulliver, A., Farrer, L. M., Kalokerinos, E. K., Cherbuin, N., Calear, A. L., … Monaghan, C. (2023). Do Emotion Intensity, Variability, Differentiation, Co-Occurrence, and Positive–Negative Ratios Make Unique Contributions to Predicting Longitudinal Change in Psychological Distress and Well-Being? *Emotion*, *23*(7), 1945–1959.

de Manzano, Ö., Theorell, T., Harmat, L., & Ullén, F. (2010). The Psychophysiology of Flow During Piano Playing. *Emotion*, *10*(3), 301–311.

Disabato, D. J., Gawlik, E. A., Aurora, P., & Coifman, K. G. (2025). Unpacking the components of positive affect variability: Implications for psychological health across contexts. *Emotion*, *25*(1), 126–143.

Dizén, M., & Berenbaum, H. (2011). Cognitive Correlates of Emotional Traits: Perceptions of Self and Others. *Emotion*, *11*(1), 115–126.

Double, K. S., Pinkus, R. T., & MacCann, C. (2022). Emotionally Intelligent People Show More Flexible Regulation of Emotions in Daily Life. *Emotion*, *22*(2), 397 402.

Gerstorf, D., Schilling, O. K., Pauly, T., Katzorreck, M., Anna, J. L., Wahl, H., … Ram, N. (2023). Supplemental Material for Long-Term Aging Trajectories of the Accumulation of Disease Burden as Predictors of Daily Affect Dynamics and Stressor Reactivity. *Psychology and Aging*, *38*(8), 763 777.

Gruber, J., Kogan, A., Quoidbach, J., & Mauss, I. B. (2013). Happiness is best kept stable: Positive emotion variability is associated with poorer psychological health. *Emotion*, *13*(1), 1 6.

Grühn, D., Lumley, M. A., Diehl, M., & Labouvie-Vief, G. (2013). Time-based indicators of emotional complexity: Interrelations and correlates. *Emotion*, *13*(2), 226 237.

Heller, A. S., Fox, A. S., & Davidson, R. J. (2019). Parsing Affective Dynamics to Identify Risk for Mood and Anxiety Disorders. *Emotion*, *19*(2), 283 291.

Hertzog, C., Lövdén, M., Lindenberger, U., & Schmiedek, F. (2017). Age differences in coupling of intraindividual variability in mnemonic strategies and practice-related associative recall improvements. *Psychology and Aging*, *32*(6), 557 571.

Hill, P. L., Aschwanden, D., Payne, B. R., & Allemand, M. (2020). Daily cognitive complaints and engagement in older adulthood: Personality traits are more predictive than cognitive performance. *Psychology and Aging*, *35*(3), 317 328.

Hill, P. L., Turiano, N. A., Spiro, A., & Mroczek, D. K. (2015). Understanding inter-individual variability in purpose: Longitudinal findings from the VA normative aging study. *Psychology and Aging*, *30*(3), 529 533.

Holtzer, R., Ross, D., Izzetoglu, M. (2021). Intraindividual Variability in Neural Activity in the Prefrontal Cortex during Active Walking in Older Adults. *Psychology and Aging*, *35*(8), 1201-1214.

Hu, D., Kalokerinos, E. K., & Tamir, M. (2023). Flexibility or Instability? Emotion Goal Dynamics and Mental Health. *Emotion*, *24*(4), 1078 1091.

Human, L. J., Whillans, A. V., Hoppmann, C. A., Klumb, P., Dickerson, S. S., & Dunn, E. W. (2015). Finding the middle ground: Curvilinear associations between positive affect variability and daily cortisol profiles. *Emotion*, *15*(6), 705 720.

Jenkins, B. N., Hunter, J. F., Richardson, M. J., Conner, T. S., & Pressman, S. D. (2020). Affect Variability and Predictability: Using Recurrence Quantification

Analysis to Better Understand How the Dynamics of Affect Relate to Health. *Emotion*, *20*(3), 391–402.

Junghaenel, D. U., Broderick, J. E., Schneider, S., Wen, C. K. F., Mak, H. W., Goldstein, S., … Stone, A. A. (2021). Explaining Age Differences in the Memory-Experience Gap. *Psychology and Aging*, *36*(6), 679–693.

Kashdan, T. B., & Farmer, A. S. (2014). Differentiating emotions across contexts: Comparing adults with and without social anxiety disorder using random, social interaction, and daily experience sampling. *Emotion*, *14*(3), 629–638.

Katzorreck, M., Nestler, S., Wrosch, C., & Kunzmann, U. (2021). Age Differences in Sadness Reactivity and Variability. *Psychology and Aging*, *37*(2), 163–174.

Keng, S. L., & Tong, E. M. W. (2016). Riding the tide of emotions with mindfulness: Mindfulness, affect dynamics, and the mediating role of coping. *Emotion*, *16*(5), 706–718.

Kennedy, Q., Taylor, J., Noda, A., Yesavage, J., & Lazzeroni, L. C. (2015). The STEP model: Characterizing simultaneous time effects on practice for flight simulator performance among middle-aged and older pilots. *Psychology and Aging*, *30*(3), 699–711.

Kerr, M. L., Rasmussen, H. F., Buttitta, K. V., Smiley, P. A., & Borelli, J. L. (2021). Exploring the complexity of mothers' real-time emotions while caregiving. *Emotion*, *21*(3), 545–556.

Kornadt, A. E., Weiss, D., Gerstorf, D., Kunzmann, U., Lücke, A. J., Schilling, O. K., … Wahl, H. W. (2021). "I felt so old this morning." Short-term variations in subjective age and the role of trait subjective age: Evidence from the ILSE/EMIL ecological momentary assessment data. *Psychology and Aging*, *36*(3), 373–382.

Koval, P., Pe, M. L., Meers, K., & Kuppens, P. (2013). Affect dynamics in relation to depressive symptoms: Variable, unstable or inert? *Emotion*, *13*(6), 1132–1141.

Krone, T., Albers, C. J., Kuppens, P., & Timmerman, M. E. (2018). A multivariate statistical model for emotion dynamics. *Emotion*, *18*(5), 739–754.

Kunzmann, U., Nestler, S., Lücke, A. J., Katzorreck, M., Hoppmann, C. A., Wahl, H. W., … Gerstorf, D. (2024). Three Facets of Emotion Regulation in Old and Very Old Age: Strategy Use, Effectiveness, and Variability. *Emotion*, *24*(2), 316–328.

Kuppens, P., Van Mechelen, I., Nezlek, J. B., Dossche, D., & Timmermans, T. (2007). Individual differences in core affect variability and their relationship to personality and psychological adjustment. *Emotion*, *7*(2), 262–274.

Landa, I., & English, T. (2022). Supplemental Material for Variability in State Authenticity Predicts Daily Affect and Emotion Regulation. *Emotion*, *22*(8), 1995–1999.

Lepage, J., Bègue, L., Zerhouni, O., Dambrun, M., Vezirian, K., Besson, T., … Mermillod, M. (2022). Authoritarian Attitudes Are Associated With Higher Autonomic Reactivity to Stress and Lower Recovery. *Emotion*, *22*(3), 526–544.

Lo, T. T., Van Lissa, C. J., Verhagen, M., Hoemann, K., Erbaş, Y., & Maciejewski, D. F. (2024). A Theory-Informed Emotion Regulation Variability Index: Bray Curtis Dissimilarity. *Emotion*, *24*(5), 1273–1285.

Lü, W., & Wang, Z. (2018). Associations between resting respiratory sinus arrhythmia, intraindividual reaction time variability, and trait positive affect. *Emotion*, *18*(6), 834–841.

MacCormack, J. K., Bonar, A. S., & Lindquist, K. A. (2024). Interoceptive Beliefs Moderate the Link Between Physiological and Emotional Arousal During an Acute Stressor. *Emotion*, *24*(1), 269–290.

Maillet, D., Yu, L., Hasher, L., & Grady, C. L. (2020). Age-related differences in the impact of mind-wandering and visual distraction on performance in a go/no-go task. *Psychology and Aging*, *35*(5), 627–638.

Moran, C. N., Mcgovern, D. P., Warren, G., Grálaigh, Ó., Kenney, J. P. M., Smeaton, A., & Dockree, P. M. (2021). Supplemental Material for Young and Restless, Old and Focused: Age-Differences in Mind-Wandering Frequency and Phenomenology. *Psychology and Aging*, *36*(2), 252–267.

Nasso, S., Vanderhasselt, M. A., Demeyer, I., & Raedt, R. De. (2019). Autonomic Regulation in Response to Stress: The Influence of Anticipatory Emotion Regulation Strategies and Trait Rumination. *Emotion*, *19*(3), 443–454.

Nelson, J., Klumparendt, A., Doebler, P., & Ehring, T. (2020). Everyday Emotional Dynamics in Major Depression. *Emotion*, *20*(2), 179–191.

Noftle, E. E., & Fleeson, W. (2010). Age Differences in Big Five Behavior Averages and Variabilities Across the Adult Life Span: Moving Beyond Retrospective, Global Summary Accounts of Personality. *Psychology and Aging*, *25*(1), 95–107.

Nowak, U., & Lincoln, T. M. (2021). An Experience-Sampling Study on the Relevance of Affect Dynamics to Paranoid Ideation. *Emotion*, *23*(1), 111–123.

Nowak, U., Wood, J., Dinu, A. N., Wittkamp, M. F., Clamor, A., Oravecz, Z., & Lincoln, T. M. (2022). Are Paranoid Ideation and Hallucination Spectrum Experiences Differently Associated With Affect Dynamics? A Continuous-Time Modeling Approach. *Emotion*, *23*(5), 1294 1305.

Ode, S., Hilmert, C. J., Zielke, D. J., & Robinson, M. D. (2010). Neuroticism's importance in understanding the daily life correlates of heart rate variability. *Emotion*, *10*(4), 536 543.

Osnes, B., Berrefjord, S. R., Poless, P. G., Sigrist, C., Koenig, J., & Sørensen, L. (2022). Low Heart Rate Variability Is Associated With a Negativity Valence Bias in Interpreting Ambiguous Emotional Expressions. *Emotion*, *23*(4), 1040 1047.

Panaite, V., Bylsma, L. M., Kovacs, M., O'Leary, K., George, C. J., Baji, I., … Rottenberg, J. (2019). Dysregulated behavioral responses to hedonic probes among youth with depression histories and their high-risk siblings. *Emotion*, *19*(1), 171 177.

Park, G., Van Bavel, J. J., Vasey, M. W., & Thayer, J. F. (2013). Cardiac vagal tone predicts attentional engagement to and disengagement from fearful faces. *Emotion*, *13*(4), 645 656.

Park, G., Van Bavel, J. J., Vasey, M. W., & Thayer, J. F. (2012). Cardiac vagal tone predicts inhibited attention to fearful faces. *Emotion*, *12*(6), 1292 1302.

Payne, B. R., & Stine-Morrow, E. A. L. (2014). Adult age differences in wrap-up during sentence comprehension: Evidence from ex-gaussian distributional analyses of reading time. *Psychology and Aging*, *29*(2), 213 228.

Piovesan, A., Mirams, L., Poole, H., Moore, D., & Ogden, R. (2019). The Relationship Between Pain-Induced Autonomic Arousal and Perceived Duration. *Emotion*, *19*(7), 1148 1161.

Ram, N., Gerstorf, D., Lindenberger, U., & Smith, J. (2011). Developmental Change and Intraindividual Variability: Relating Cognitive Aging to Cognitive Plasticity, Cardiovascular Lability, and Emotional Diversity. *Psychology and Aging*, *26*(2), 363 371.

Reitsema, A. M., Jeronimus, B. F., Dijk, M. Van, & Jonge, P. De. (2022). Supplemental Material for Emotion Dynamics in Children and Adolescents: A Meta-Analytic and Descriptive Review. *Emotion*, *22*(2), 374 396.

Scheibe, S., Yeung, D. Y., & Doerwald, F. (2019). Age-related differences in levels and dynamics of workplace affect. *Psychology and Aging*, *34*(1), 106 123.

Scott, J. K., Dix, T., Moed, A., Anderson, E. R., & Greene, S. M. (2020). Transient changes in mothers' negative emotional reactivity predict changes in the intensity, persistence, and variability of their aversive behavior. *Emotion*, *22*(6), 1294–1306.

Scott, S. B., Sliwinski, M. J., Mogle, J. A., & Almeida, D. M. (2014). Age, stress, and emotional complexity: Results from two studies of daily experiences. *Psychology and Aging*, *29*(3), 577–587.

Shenhav, A., & Mendes, W. B. (2014). Aiming for the stomach and hitting the heart: Dissociable triggers and sources for disgust reactions. *Emotion*, *14*(2), 301–309.

Sperry, S. H., & Kwapil, T. R. (2022). Supplemental Material for Bipolar Spectrum Psychopathology Is Associated With Altered Emotion Dynamics Across Multiple Timescales. *Emotion*, *22*(4), 627–640.

Tremblay, P., Deschamps, I., & Bédard, P. (2018). Supplemental Material for Aging of Speech Production, From Articulatory Accuracy to Motor Timing. *Psychology and Aging*, *33*(7), 1022–1034.

Turgeon, M., & Wing, A. M. (2012). Late onset of age-related difference in unpaced tapping with no age-related difference in phase-shift error detection and correction. *Psychology and Aging*, *27*(4), 1152–1163.

Vasquez, B. P., & Anderson, N. D. (2018). Slow and steady: Training induced improvements to response time consistency are due to overall slowing and minimized extremely slow responses. *Psychology and Aging*, *33*(8), 1181–1194.

Wendt, J., Weymar, M., Junge, M., Hamm, A. O., & Lischke, A. (2019). Supplemental Material for Heartfelt Memories: Cardiac Vagal Tone Correlates With Increased Memory for Untrustworthy Faces. *Emotion*, *19*(1), 178–182.

Wenzel, M., Blanke, E. S., Rowland, Z., & Kubiak, T. (2022). Emotion Regulation Dynamics in Daily Life: Adaptive Strategy Use May Be Variable Without Being Unstable and Predictable Without Being Autoregressive. *Emotion*, *22*(7), 1487–1504.

Williams, D. P., Tracy, L. M., Gerardo, G. M., Rahman, T., Spangler, D. P., Koenig, J., & Thayer, J. F. (2019). Supplemental Material for Sex Moderates the Relationship Between Resting Heart Rate Variability and Self-Reported Difficulties in Emotion Regulation. *Emotion*, *19*(6), 992–1001.

Winter, T., Conner, T. S., & Jose, P. E. (2021). Identifying profiles of affective change: An ecological momentary assessment of flourishers. *Emotion*, *21*(3), 584–594.

Wolff, J. K., Brose, A., Lövdén, M., Tesch-Römer, C., Lindenberger, U., & Schmiedek, F. (2012). Health is health is health Age differences in intraindividual variability and in within-person versus between-person factor structures of self-reported health complaints. *Psychology and Aging*, *27*(4), 881 891.

Xie, W., Ye, C., & Zhang, W. (2023). Supplemental Material for Negative Emotion Reduces Visual Working Memory Recall Variability: A Meta-Analytical Review. *Emotion*, *23*(3), 859 871.

Zee, K. S., & Weiss, D. (2019). Supplemental Material for High-Quality Relationships Strengthen the Benefits of a Younger Subjective Age Across Adulthood. *Psychology and Aging*, *34*(3), 374 388.

Zhaoyang, R., Sliwinski, M. J., Martire, L. M., & Smyth, J. M. (2018). Age differences in adults' daily social interactions: An ecological momentary assessment study. *Psychology and Aging*, *33*(4), 607 618.

Appendix B. Results from other effect size conditions

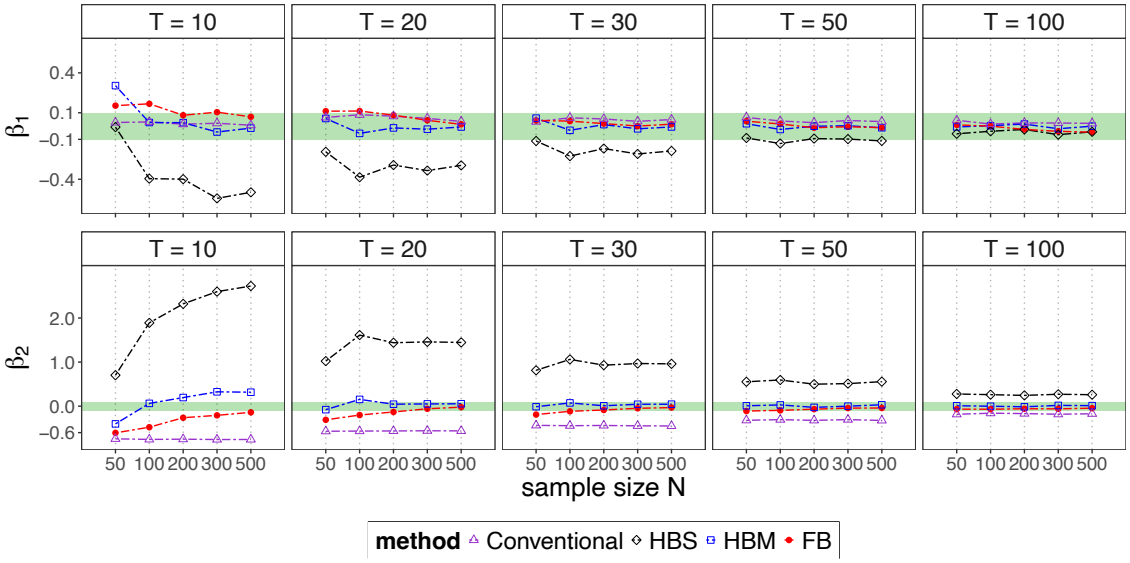
1. ISD is a predictor

1.1 $\beta_3 = 0$

True values: $\beta_1 = .42$, $\beta_2 = 1.65$, $\beta_3 = 0$

Figure S1

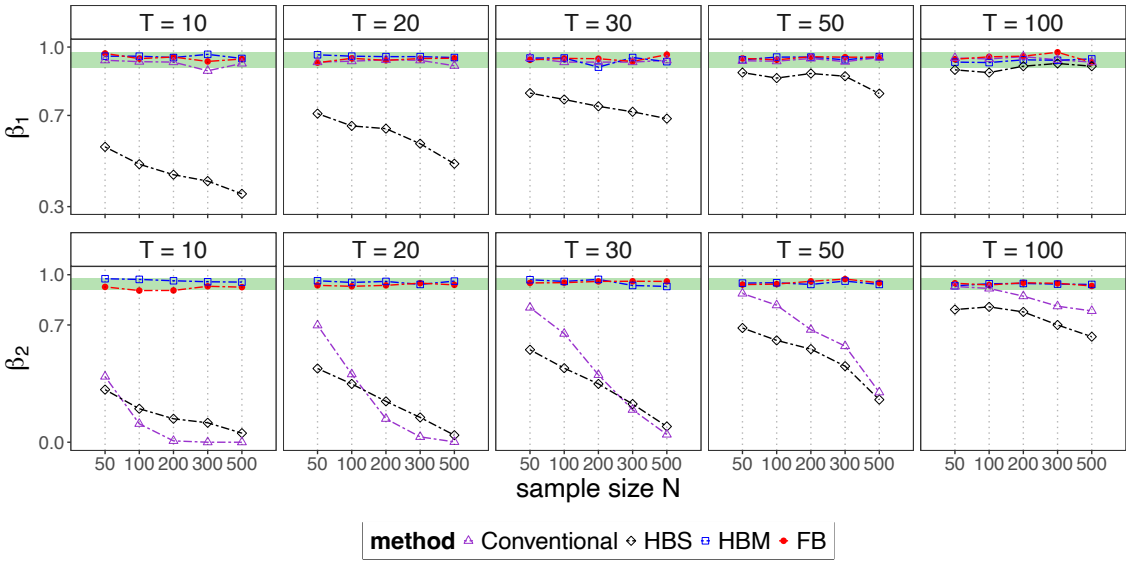
Relative bias results of β_1, β_2 from conditions with $\beta_3 = 0$



Note. The green dashed lines mark the range of $[-.1, .1]$ for ignorable relative biases.

Figure S2

Coverage rates results of β_1, β_2 from conditions with $\beta_3 = 0$



Note. The green dashed lines mark the range of $[.91, .98]$ for satisfactory 95% CI coverage rates.

Figure S3

Empirical bias results of β_3 from conditions with $\beta_3 = 0$

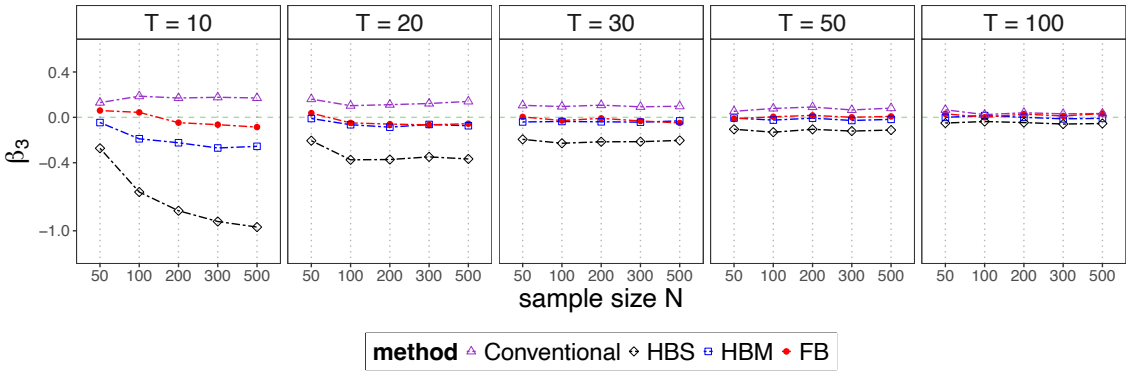
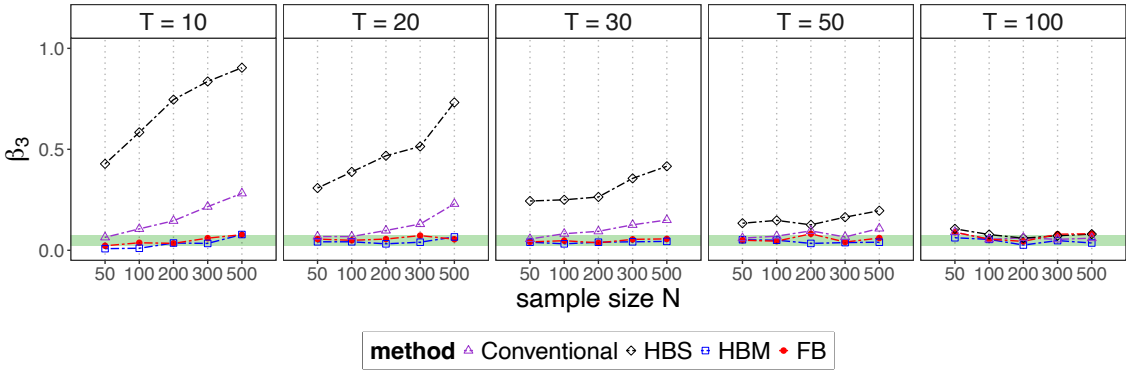


Figure S4

Type I error rate results of β_3 from conditions with $\beta_3 = 0$



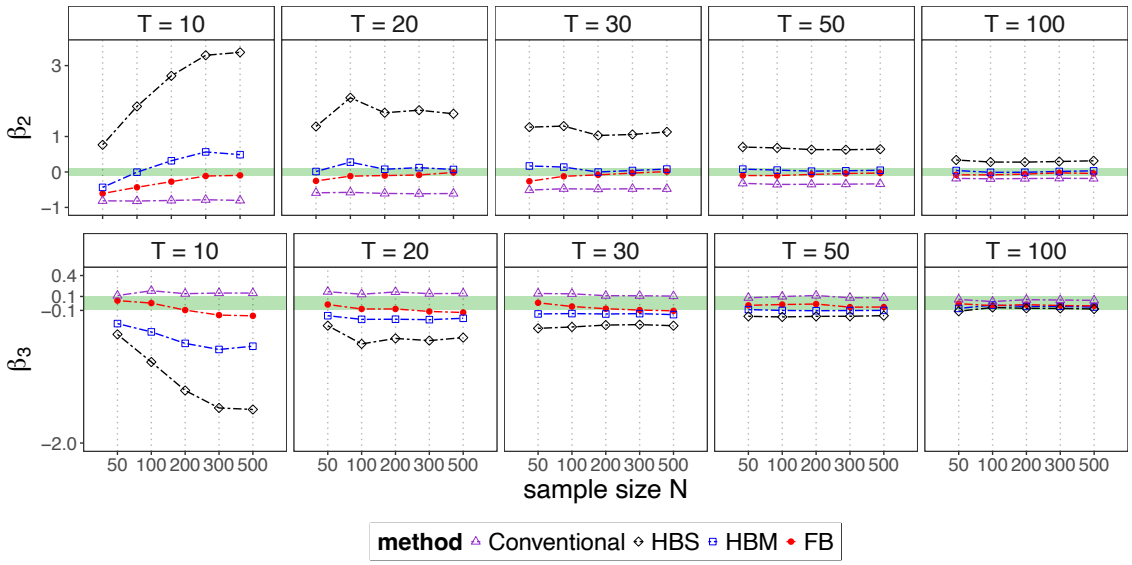
Note. The green dashed lines mark the range of $[.025, .075]$ for well-controlled Type I error rates.

1.2 $\beta_1 = 0$

True values: $\beta_1 = 0$, $\beta_2 = 1.55$, $\beta_3 = .72$

Figure S5

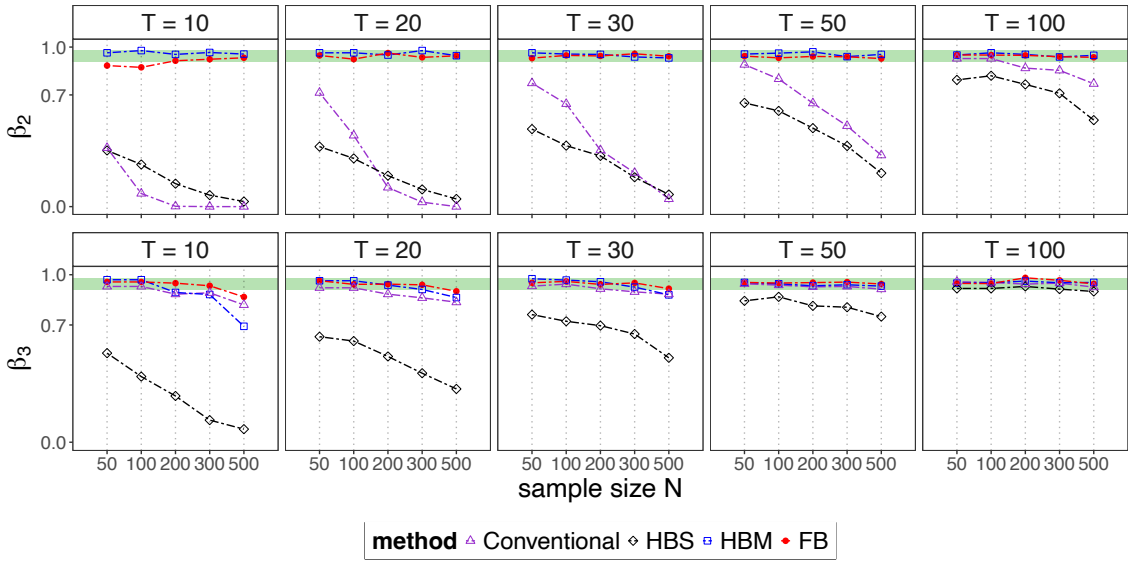
Relative bias results of β_2, β_3 *from conditions with* $\beta_1 = 0$



Note. The green dashed lines mark the range of $[-.1, .1]$ for ignorable relative biases.

Figure S6

Coverage rates results of β_2, β_3 from conditions with $\beta_1 = 0$



Note. The green dashed lines mark the range of $[.91, .98]$ for satisfactory 95% CI coverage rates.

Figure S7

Empirical bias results of β_1 from conditions with $\beta_1 = 0$

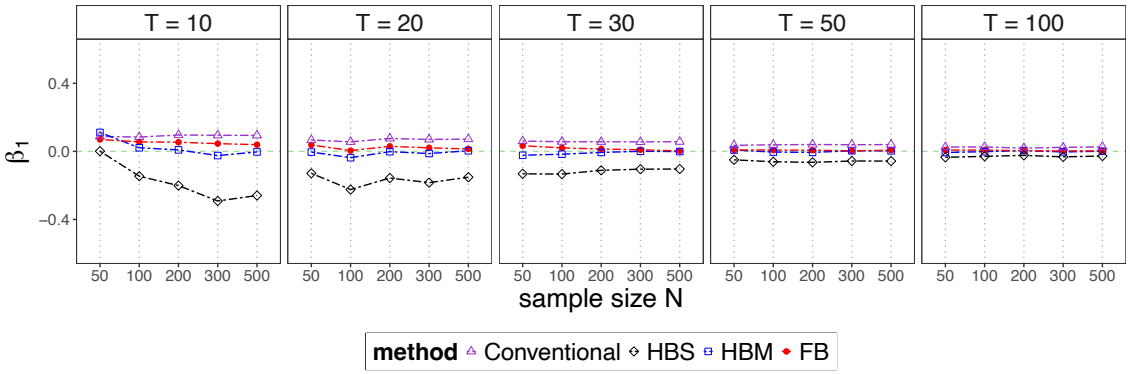
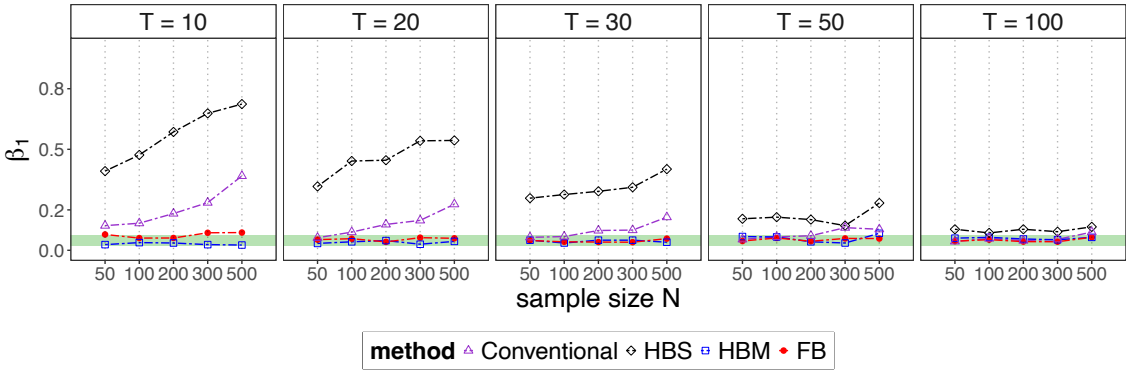


Figure S8

Type I error rate results of β_1 from conditions with $\beta_1 = 0$



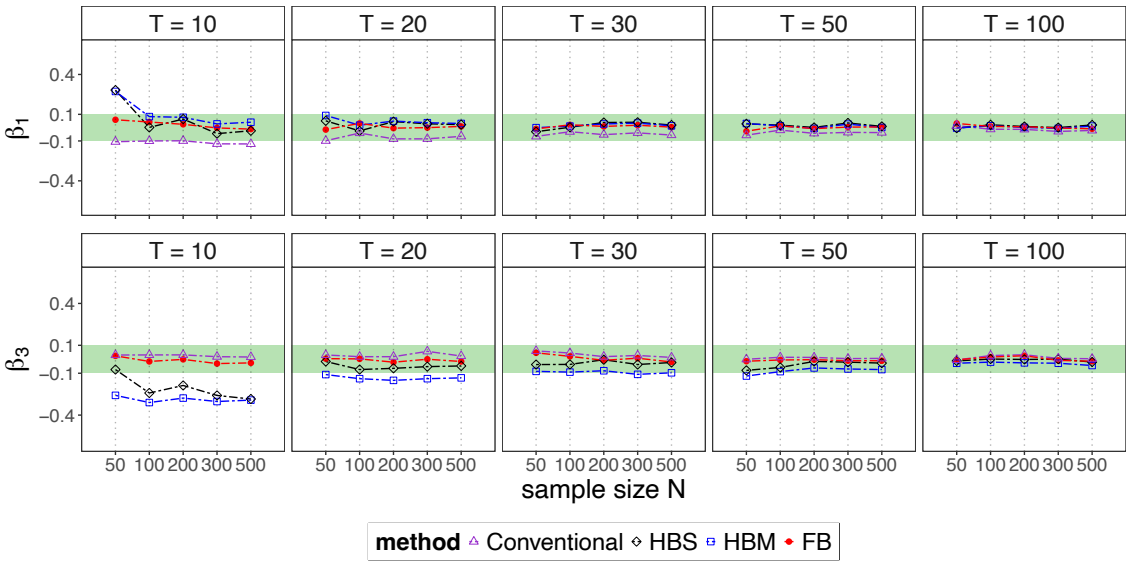
Note. The green dashed lines mark the range of $[.025, .075]$ for well-controlled Type I error rates.

1.3 $\beta_2 = 0$

True values: $\beta_1 = .43$, $\beta_2 = 0$, $\beta_3 = .78$

Figure S9

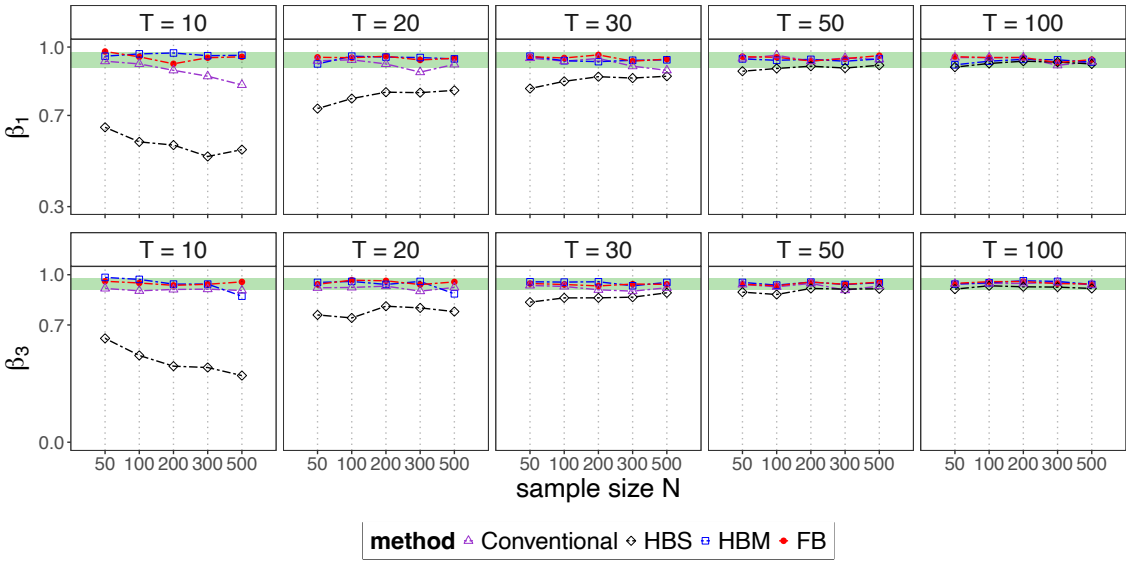
Relative bias results of β_1, β_3 from conditions with $\beta_2 = 0$



Note. The green dashed lines mark the range of $[-.1, .1]$ for ignorable relative biases.

Figure S10

Coverage rates results of β_1, β_3 from conditions with $\beta_2 = 0$



Note. The green dashed lines mark the range of $[.91, .98]$ for satisfactory 95% CI coverage rates.

Figure S11

Empirical bias results of β_2 from conditions with $\beta_2 = 0$

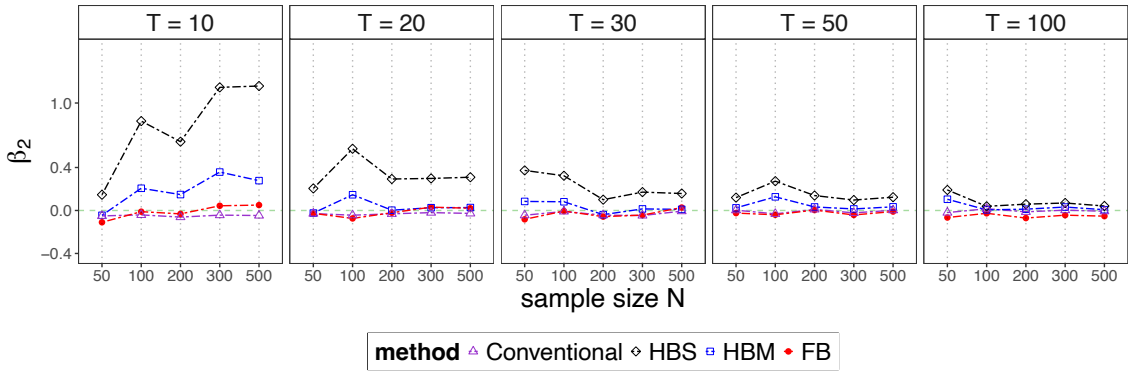
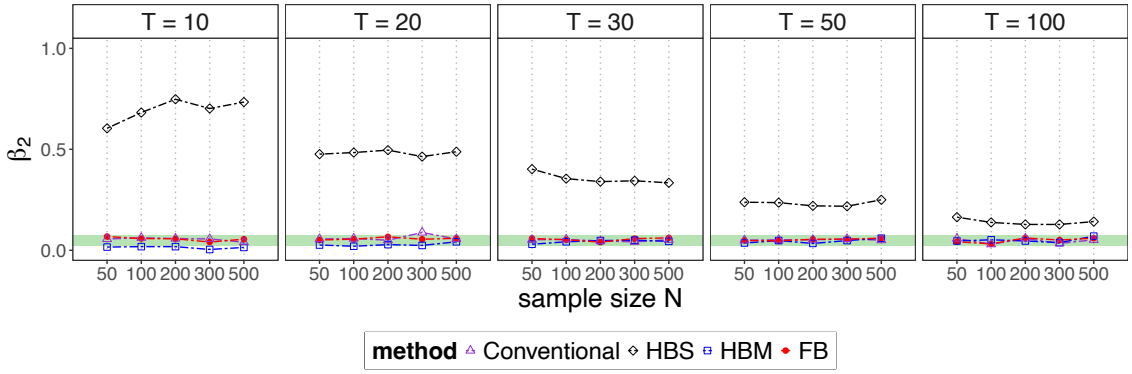


Figure S12

Type I error rate results of β_2 from conditions with $\beta_2 = 0$



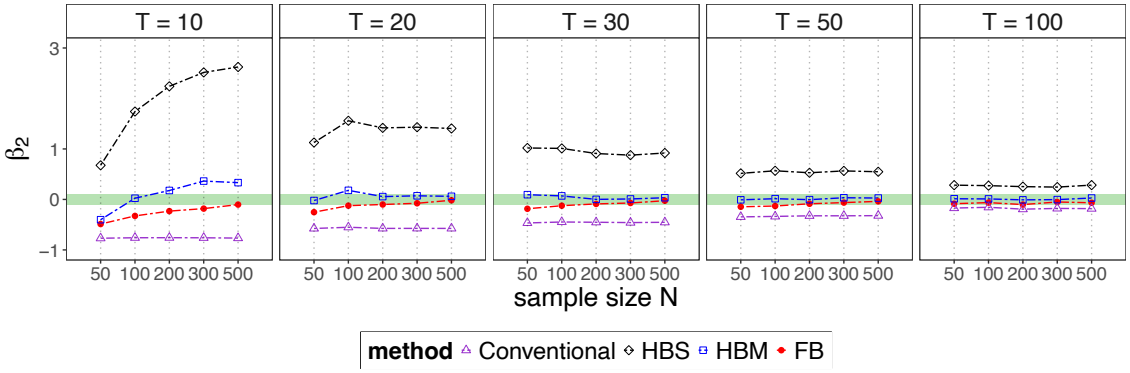
Note. The green dashed lines mark the range of $[.025, .075]$ for well-controlled Type I error rates.

1.4 $\beta_1 = 0, \beta_3 = 0$

True values: $\beta_1 = 0$, $\beta_2 = 1.97$, $\beta_3 = 0$

Figure S13

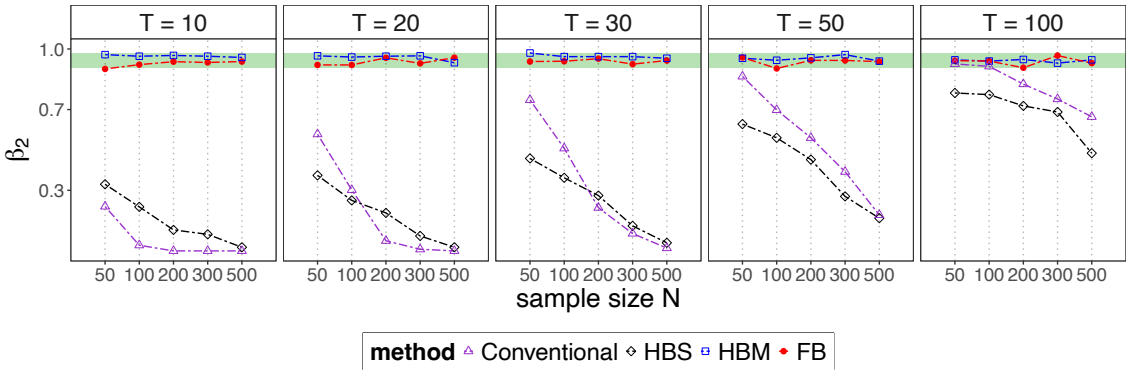
Relative bias results of β_2 from conditions with $\beta_1 = 0, \beta_3 = 0$



Note. The green dashed lines mark the range of $[-.1, .1]$ for ignorable relative biases.

Figure S14

Coverage rates results of β_2 from conditions with $\beta_1 = 0, \beta_3 = 0$



Note. The green dashed lines mark the range of $[.91, .98]$ for satisfactory 95% CI coverage rates.

Figure S15

Empirical bias results of β_1, β_3 *from conditions with* $\beta_1 = 0, \beta_3 = 0$

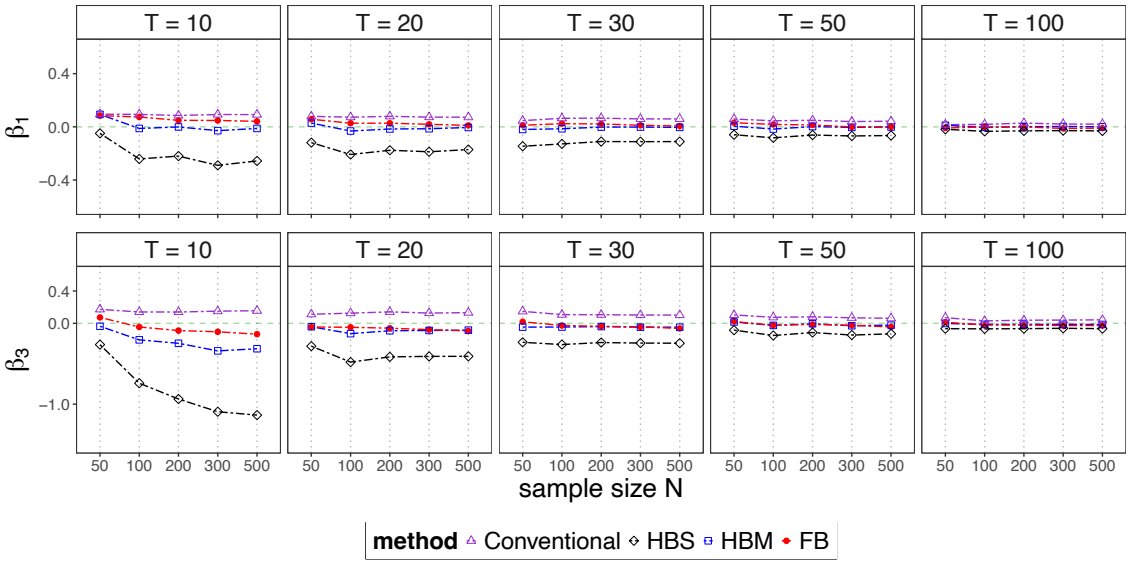
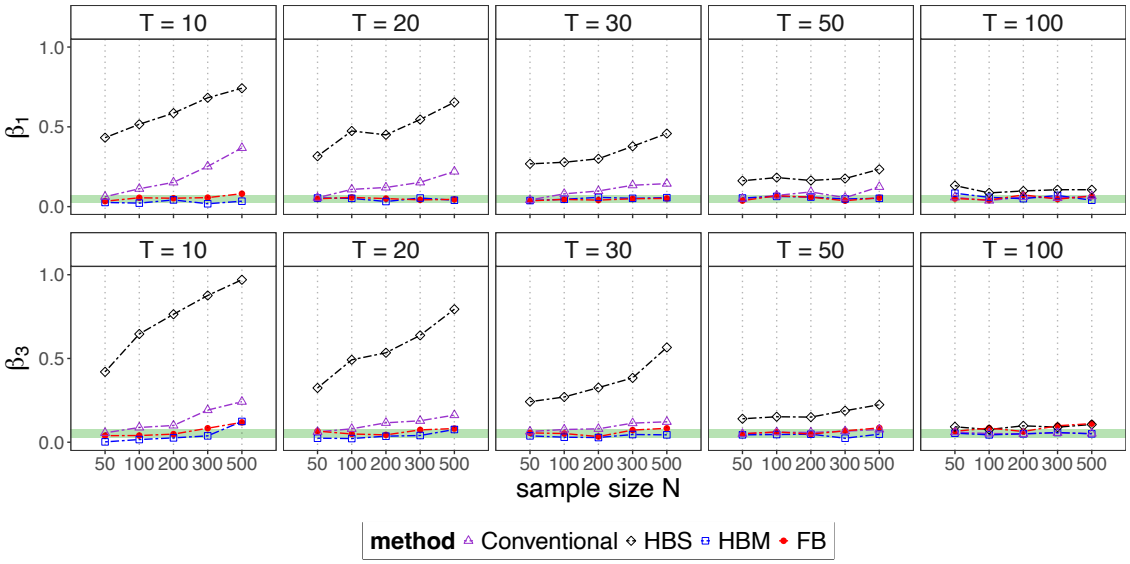


Figure S16

Type I error rate results of β_1, β_3 from conditions with $\beta_1 = 0, \beta_3 = 0$



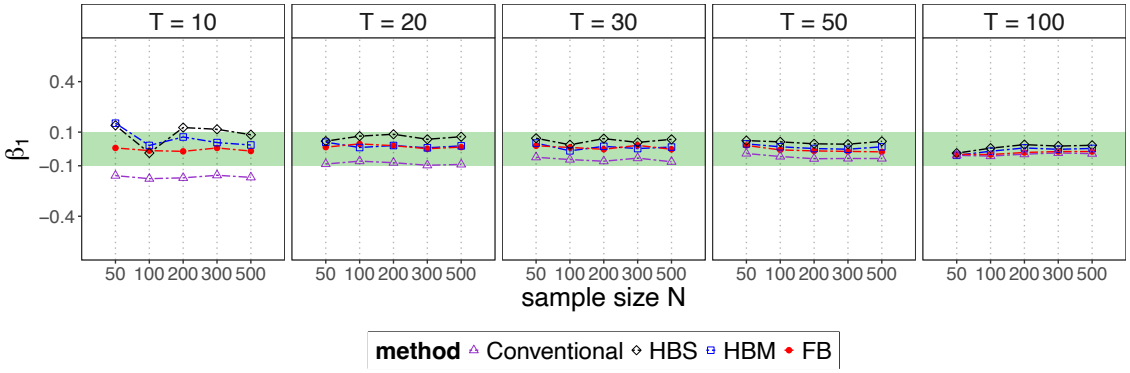
Note. The green dashed lines mark the range of $[.025, .075]$ for well-controlled Type I error rates.

1.5 $\beta_2 = 0, \beta_3 = 0$

True values: $\beta_1 = .5$, $\beta_2 = 0$, $\beta_3 = 0$

Figure S17

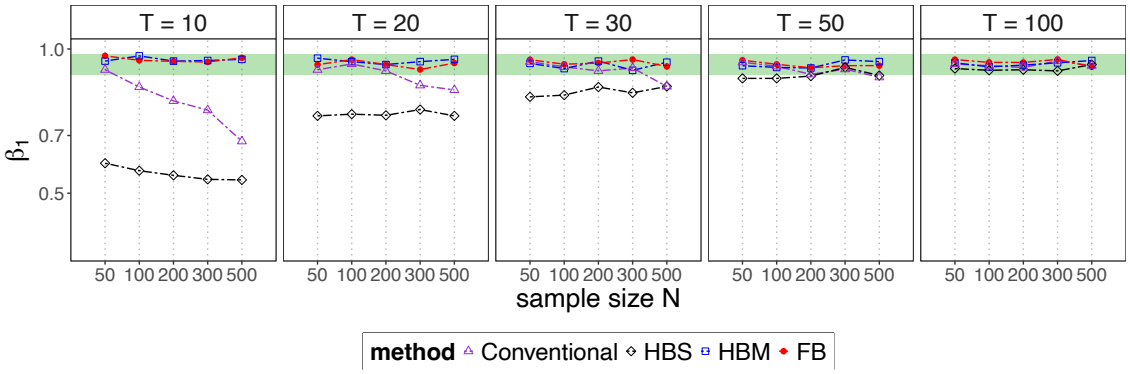
Relative bias results of β_1 *from conditions with* $\beta_2 = 0, \beta_3 = 0$



Note. The green dashed lines mark the range of $[-.1, .1]$ for ignorable relative biases.

Figure S18

Coverage rates results of β_1 *from conditions with* $\beta_2 = 0, \beta_3 = 0$



Note. The green dashed lines mark the range of $[.91, .98]$ for satisfactory 95% CI coverage rates.

Figure S19

Empirical bias results of β_2, β_3 *from conditions with* $\beta_2 = 0, \beta_3 = 0$

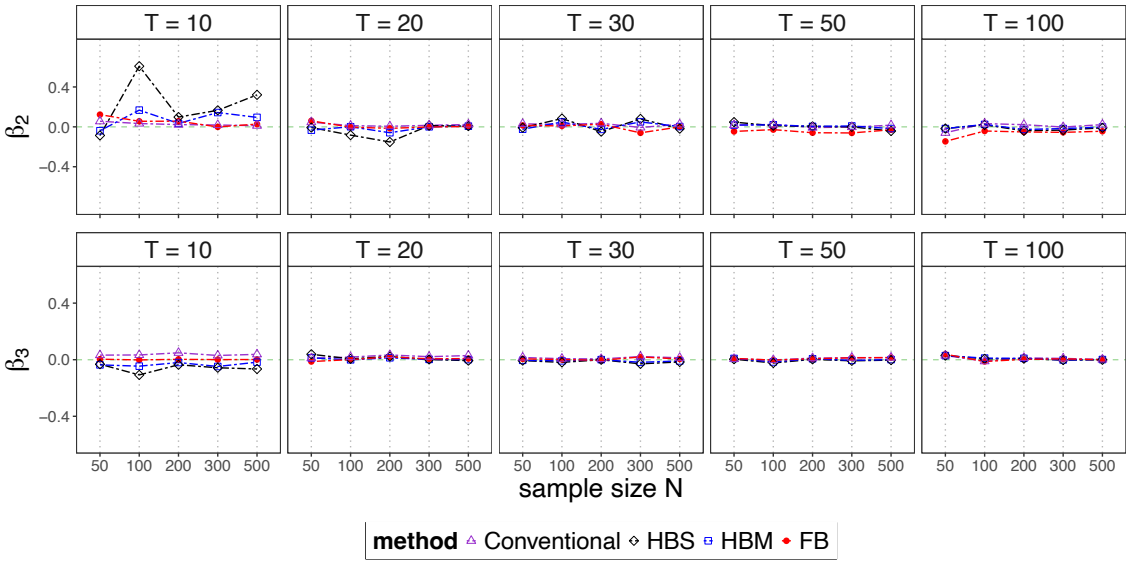
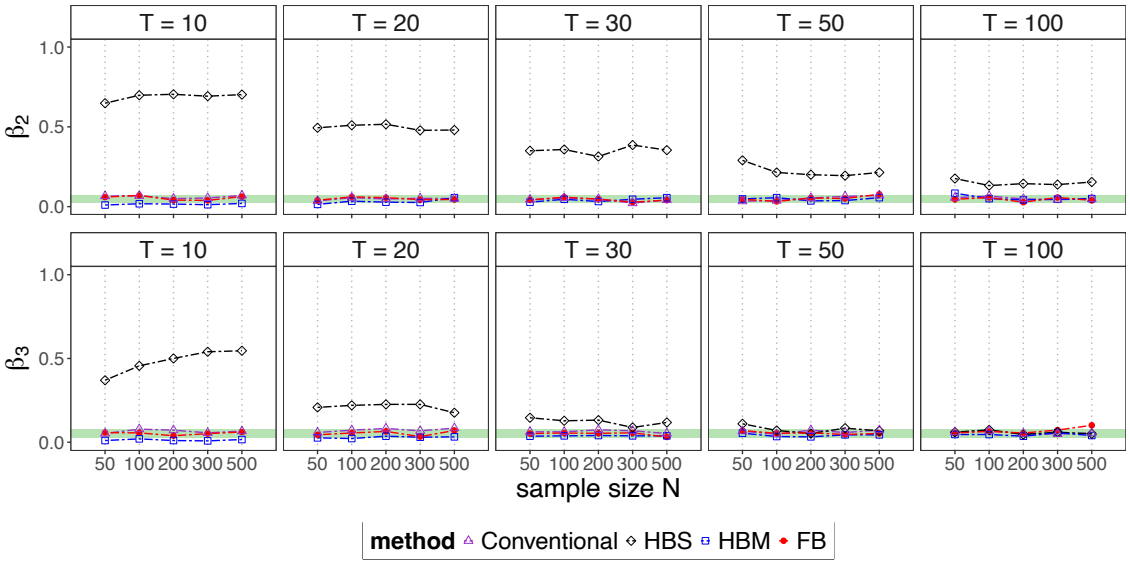


Figure S20

Type I error rate results of β_2, β_3 from conditions with $\beta_2 = 0, \beta_3 = 0$



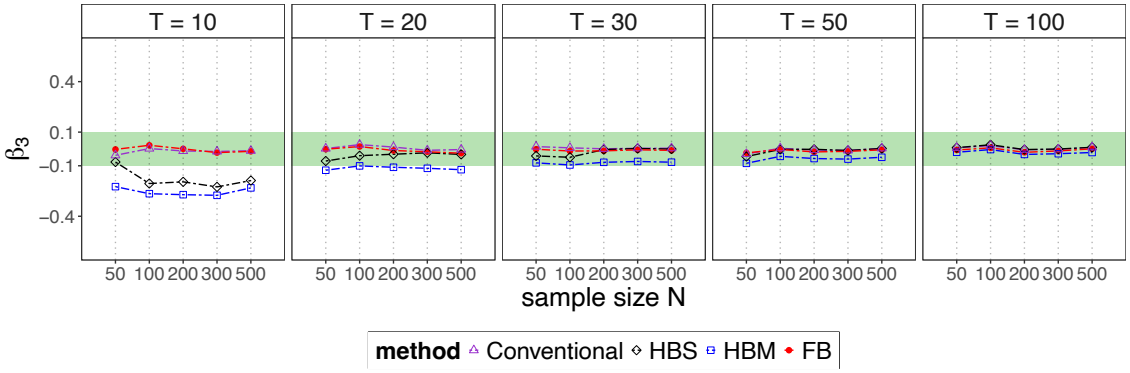
Note. The green dashed lines mark the range of $[.025, .075]$ for well-controlled Type I error rates.

1.6 $\beta_1 = 0, \beta_2 = 0$

True values: $\beta_1 = 0$, $\beta_2 = 0$, $\beta_3 = .9$

Figure S21

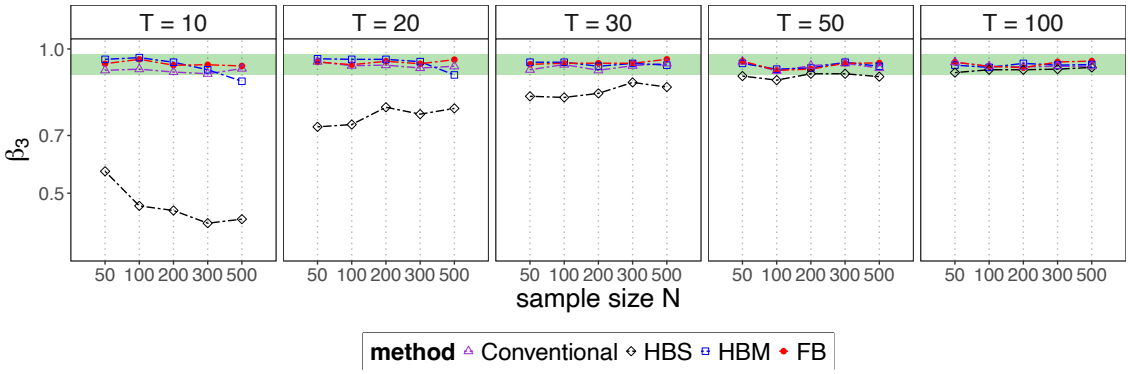
Relative bias results of β_3 from conditions with $\beta_1 = 0, \beta_2 = 0$



Note. The green dashed lines mark the range of $[-.1, .1]$ for ignorable relative biases.

Figure S22

Coverage rates results of β_3 from conditions with $\beta_1 = 0, \beta_2 = 0$



Note. The green dashed lines mark the range of $[.91, .98]$ for satisfactory 95% CI coverage rates.

Figure S23

Empirical bias results of β_1, β_2 *from conditions with* $\beta_1 = 0, \beta_2 = 0$

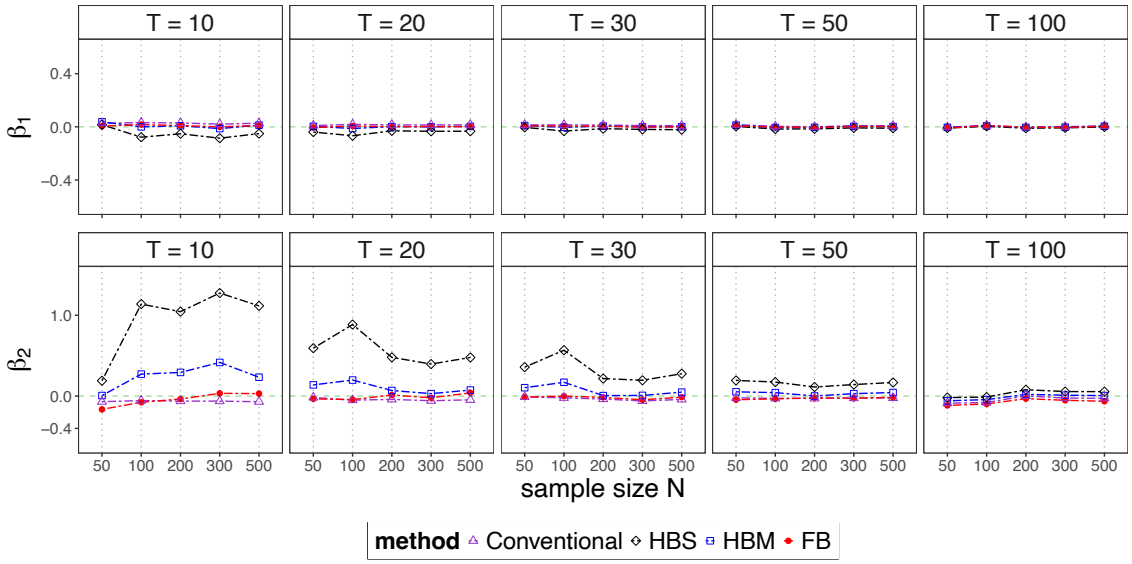
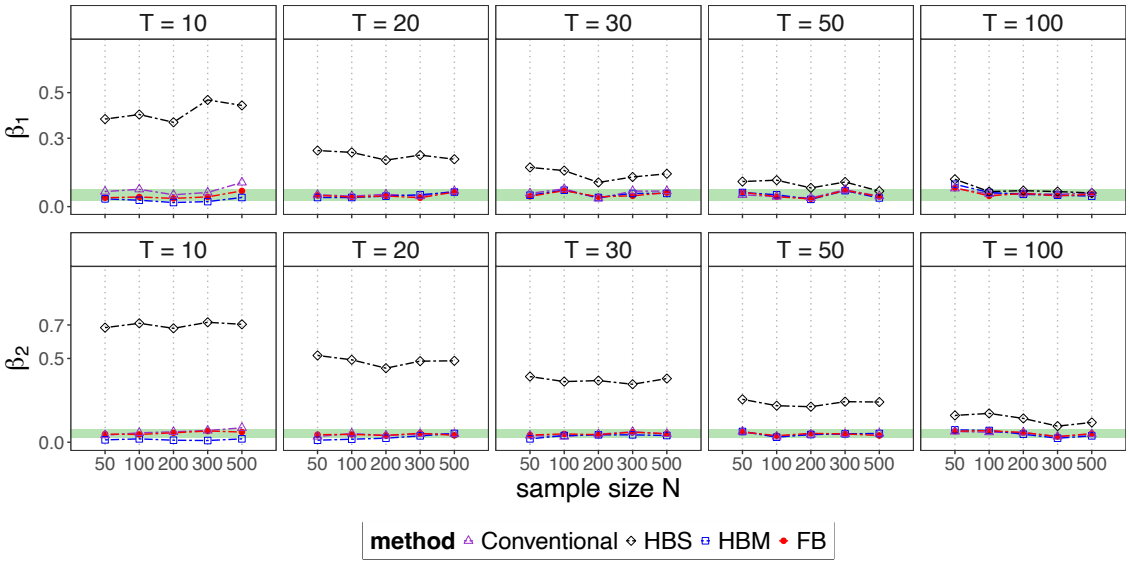


Figure S24

Type I error rate results of β_1, β_2 *from conditions with* $\beta_1 = 0, \beta_2 = 0$



Note. The green dashed lines mark the range of $[.025, .075]$ for well-controlled Type I error rates.

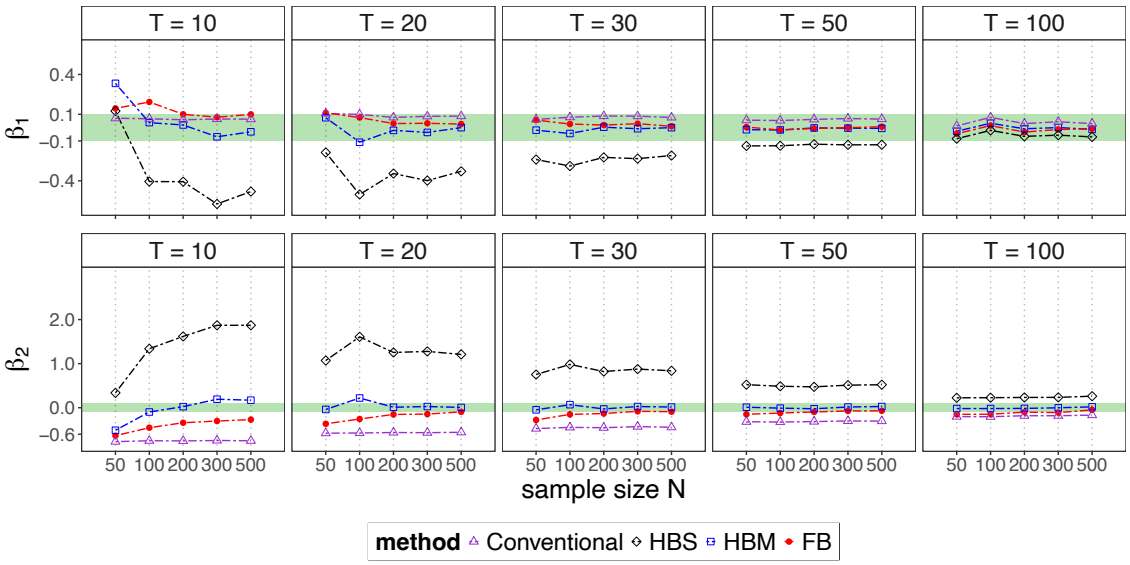
2. IVAR is a predictor

2.1 $\beta_3 = 0$

True values: $\beta_1 = .39$, $\beta_2 = 1.7$, $\beta_3 = 0$

Figure S25

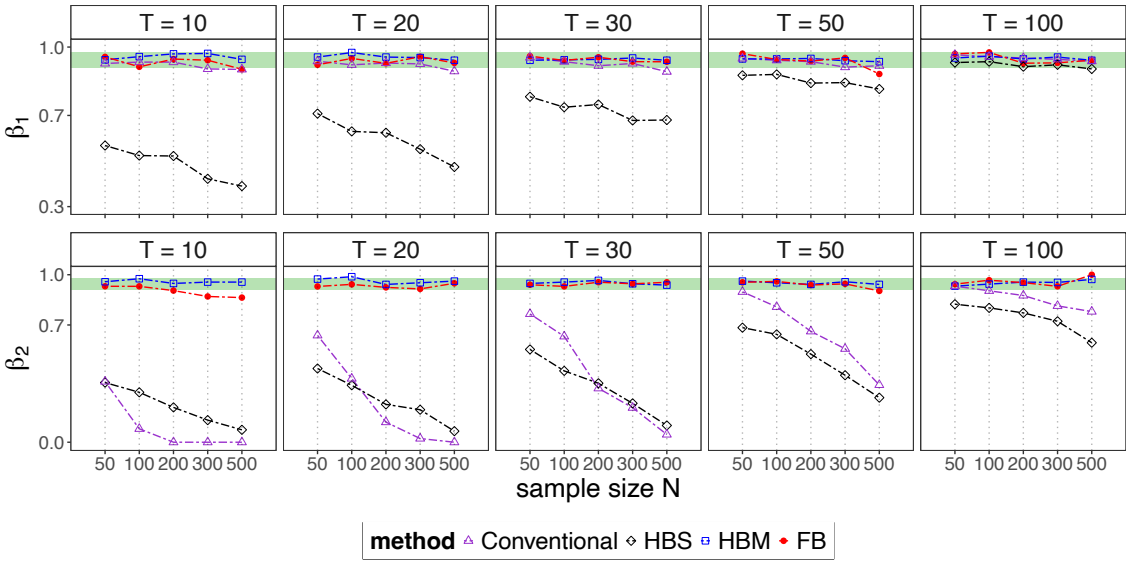
Relative bias results of β_1, β_2 from conditions with $\beta_3 = 0$



Note. The green dashed lines mark the range of $[-.1, .1]$ for ignorable relative biases.

Figure S26

Coverage rates results of β_1, β_2 *from conditions with* $\beta_3 = 0$



Note. The green dashed lines mark the range of $[.91, .98]$ for satisfactory 95% CI coverage rates.

Figure S27

Empirical bias results of β_3 from conditions with $\beta_3 = 0$

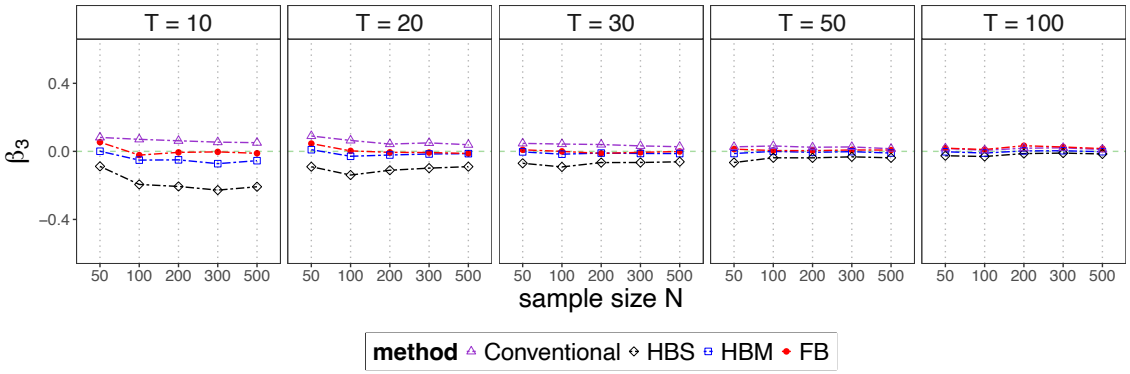
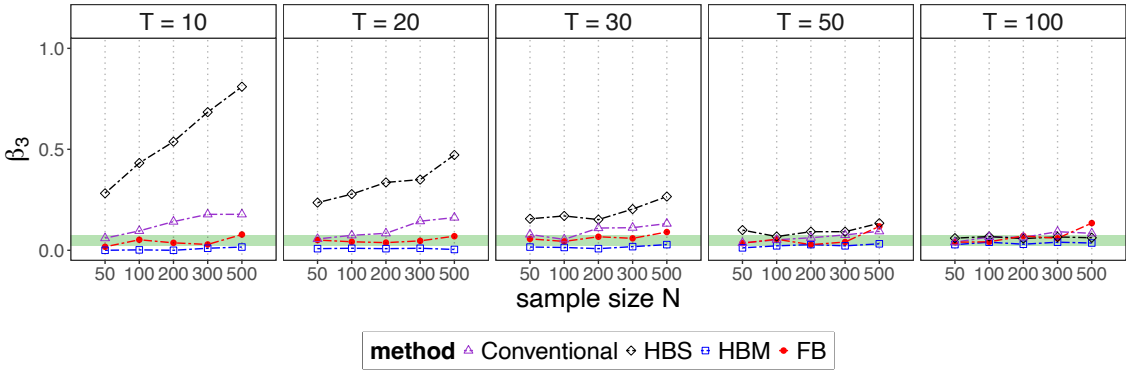


Figure S28

Type I error rate results of β_3 from conditions with $\beta_3 = 0$



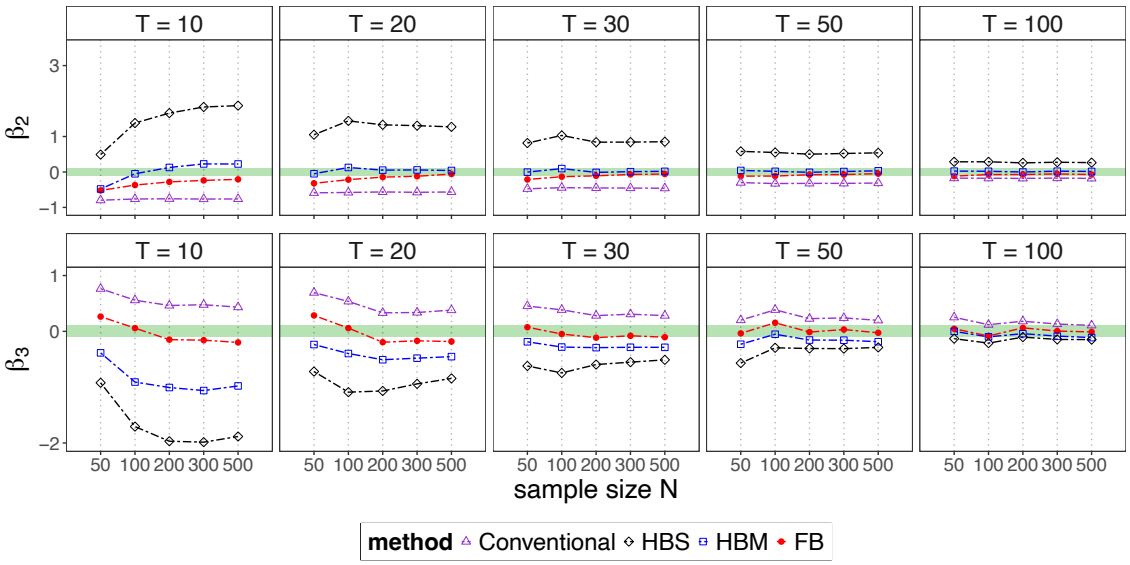
Note. The green dashed lines mark the range of $[.025, .075]$ for well-controlled Type I error rates.

2.2 $\beta_1 = 0$

True values: $\beta_1 = 0$, $\beta_2 = 1.9$, $\beta_3 = .13$

Figure S29

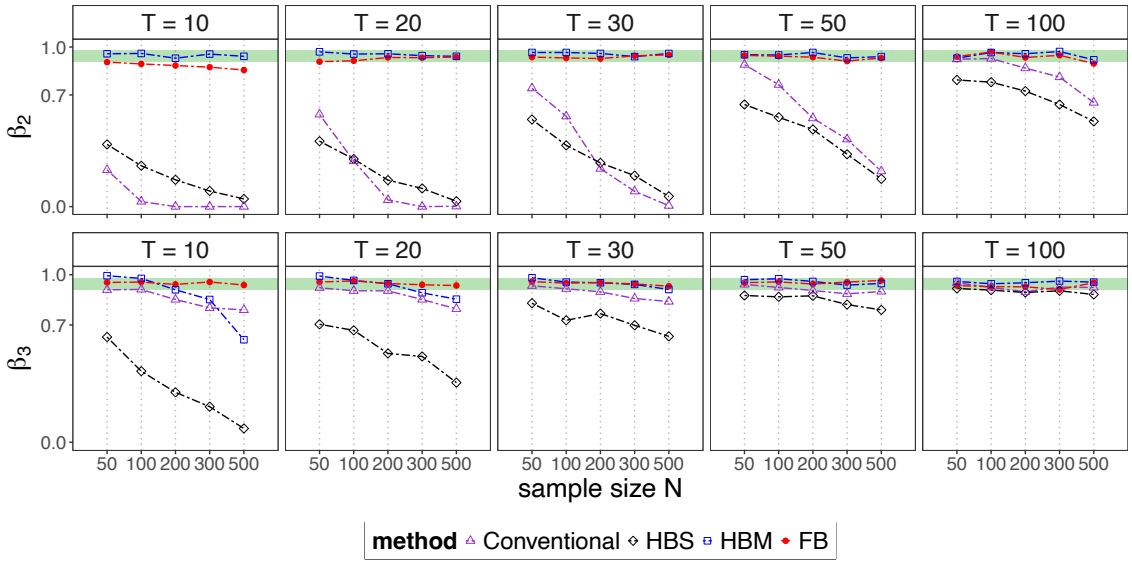
Relative bias results of β_2, β_3 from conditions with $\beta_1 = 0$



Note. The green dashed lines mark the range of $[-.1, .1]$ for ignorable relative biases.

Figure S30

Coverage rates results of β_2, β_3 *from conditions with* $\beta_1 = 0$



Note. The green dashed lines mark the range of $[.91, .98]$ for satisfactory 95% CI coverage rates.

Figure S31

Empirical bias results of β_1 from conditions with $\beta_1 = 0$

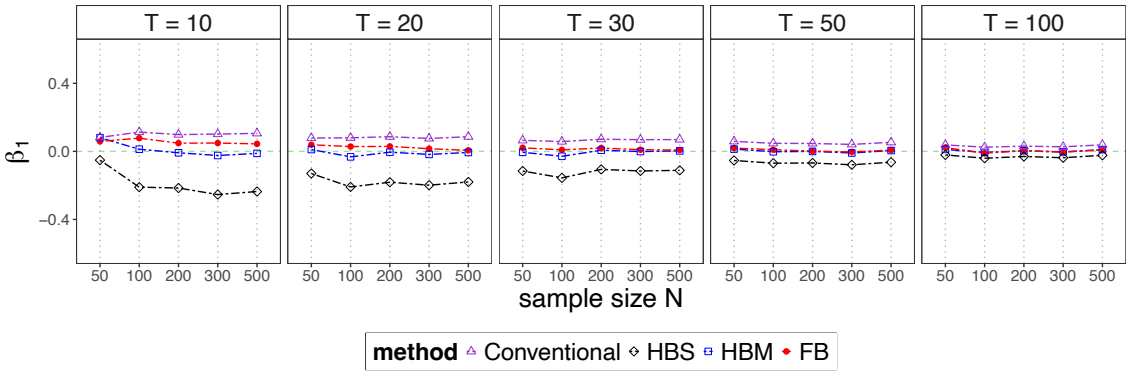
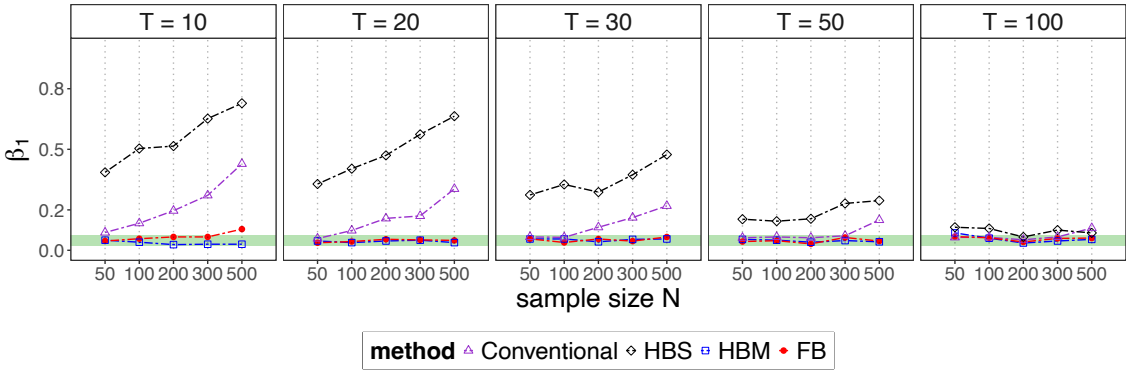


Figure S32

Type I error rate results of β_1 from conditions with $\beta_1 = 0$



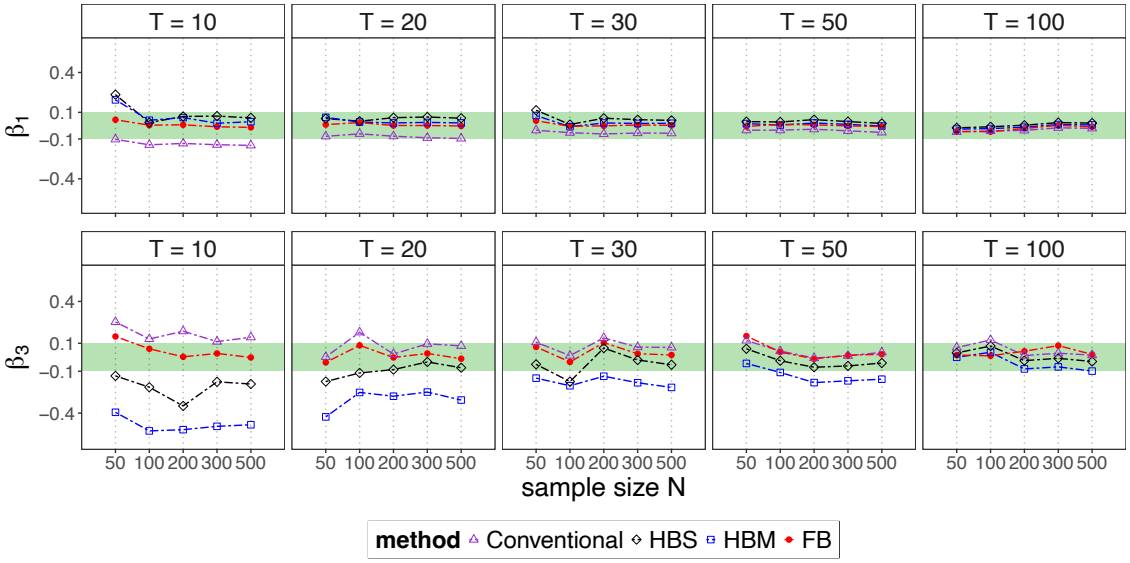
Note. The green dashed lines mark the range of $[.025, .075]$ for well-controlled Type I error rates.

2.3 $\beta_2 = 0$

True values: $\beta_1 = .47$, $\beta_2 = 0$, $\beta_3 = .13$

Figure S33

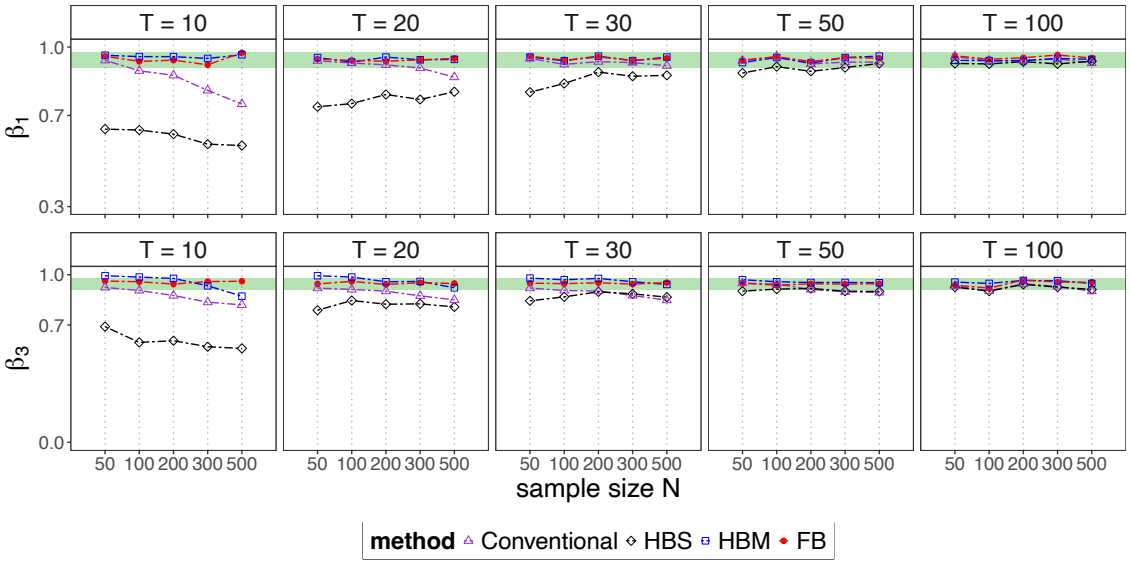
Relative bias results of β_1, β_3 *from conditions with* $\beta_2 = 0$



Note. The green dashed lines mark the range of $[-.1, .1]$ for ignorable relative biases.

Figure S34

Coverage rates results of β_1, β_3 from conditions with $\beta_2 = 0$



Note. The green dashed lines mark the range of $[.91, .98]$ for satisfactory 95% CI coverage rates.

Figure S35

Empirical bias results of β_2 from conditions with $\beta_2 = 0$

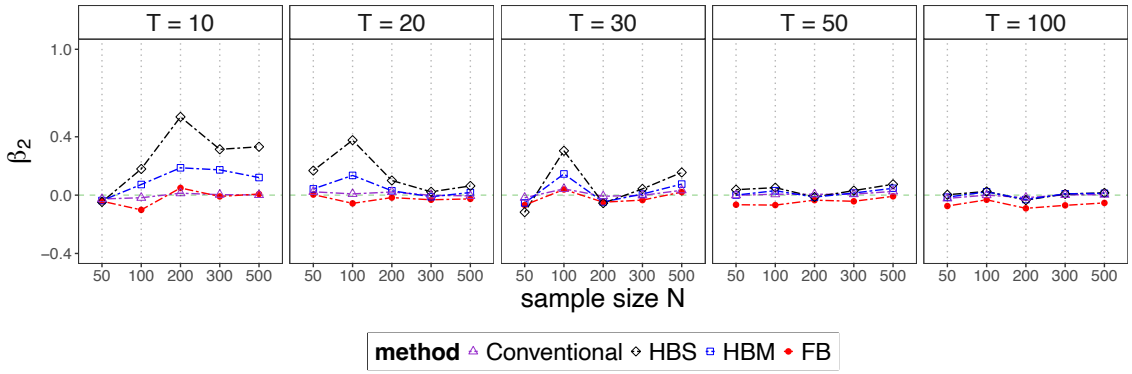
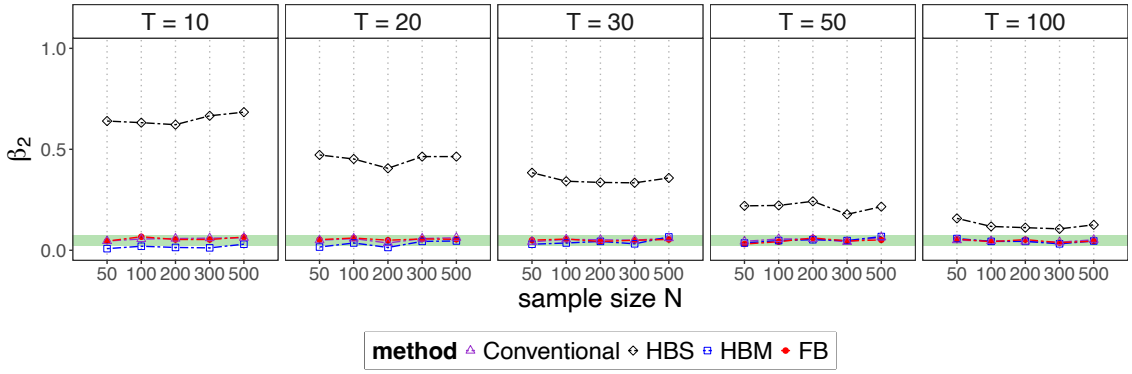


Figure S36

Type I error rate results of β_2 from conditions with $\beta_2 = 0$



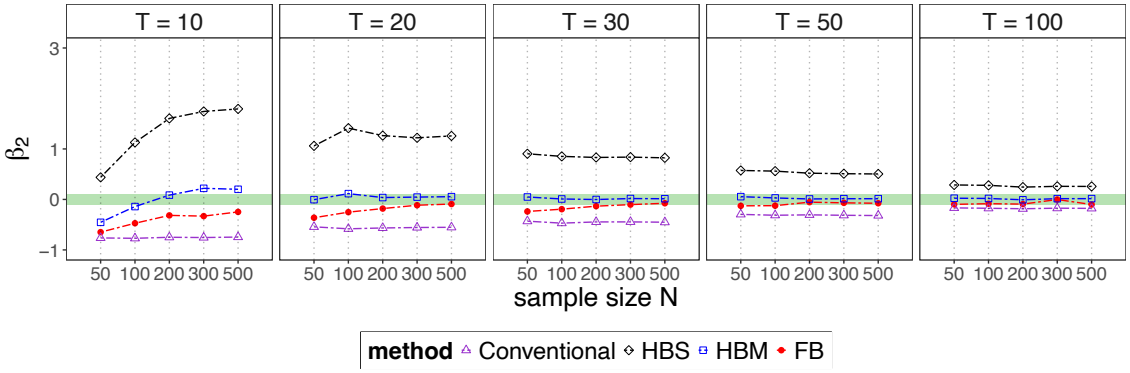
Note. The green dashed lines mark the range of $[.025, .075]$ for well-controlled Type I error rates.

2.4 $\beta_1 = 0, \beta_3 = 0$

True values: $\beta_1 = 0$, $\beta_2 = 2$, $\beta_3 = 0$

Figure S37

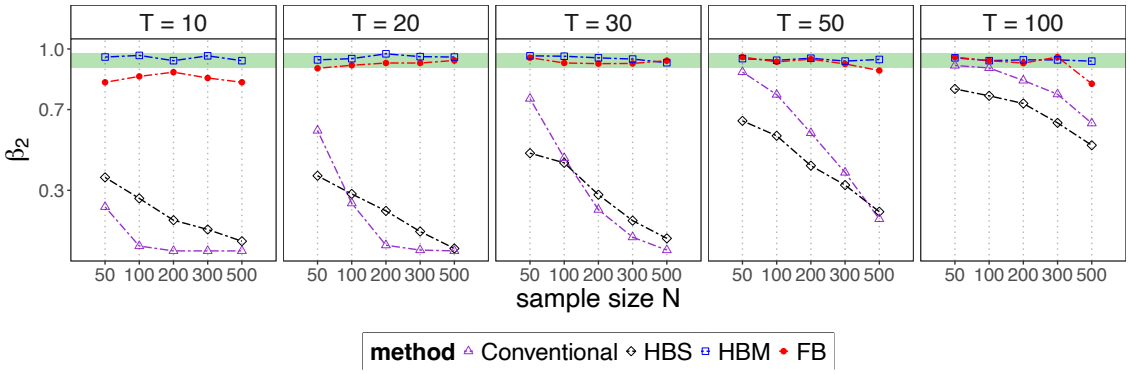
Relative bias results of β_2 *from conditions with* $\beta_1 = 0, \beta_3 = 0$



Note. The green dashed lines mark the range of $[-.1, .1]$ for ignorable relative biases.

Figure S38

Coverage rates results of β_2 *from conditions with* $\beta_1 = 0, \beta_3 = 0$



Note. The green dashed lines mark the range of $[.91, .98]$ for satisfactory 95% CI coverage rates.

Figure S39

Empirical bias results of β_1, β_3 *from conditions with* $\beta_1 = 0, \beta_3 = 0$

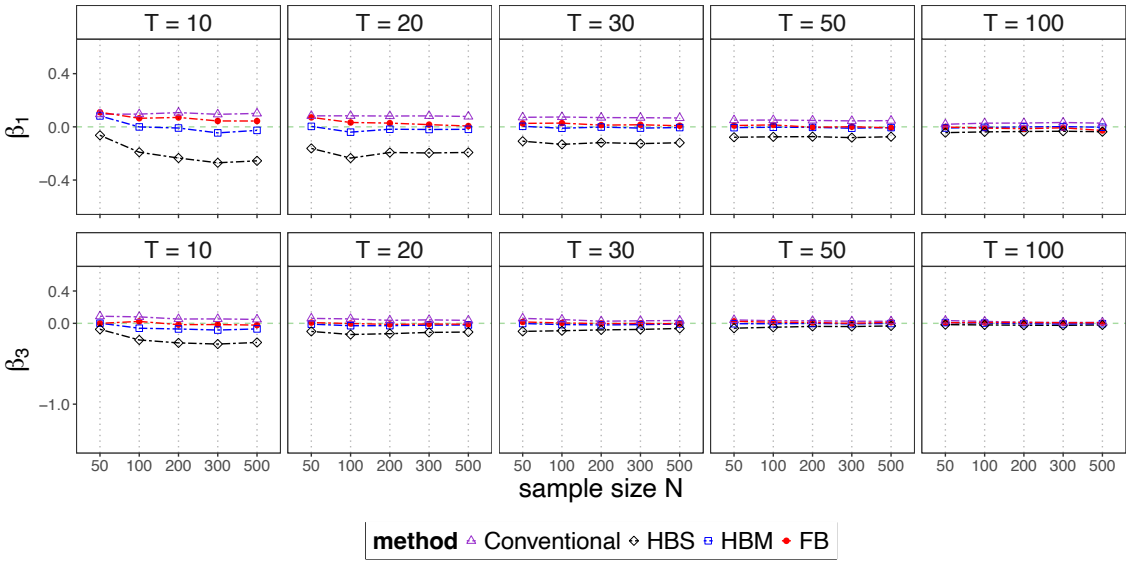
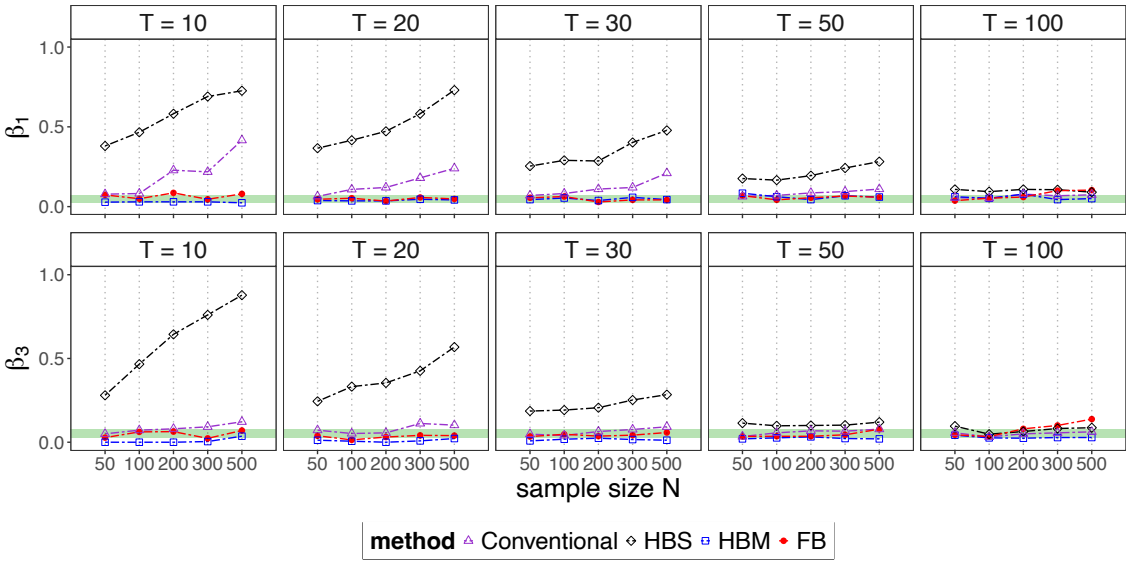


Figure S40

Type I error rate results of β_1, β_3 from conditions with $\beta_1 = 0, \beta_3 = 0$



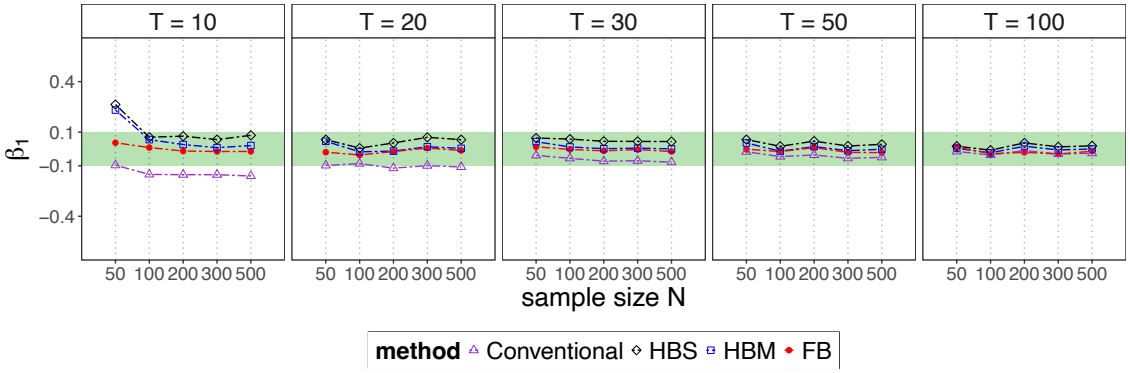
Note. The green dashed lines mark the range of $[.025, .075]$ for well-controlled Type I error rates.

2.5 $\beta_2 = 0, \beta_3 = 0$

True values: $\beta_1 = .48$, $\beta_2 = 0$, $\beta_3 = 0$

Figure S41

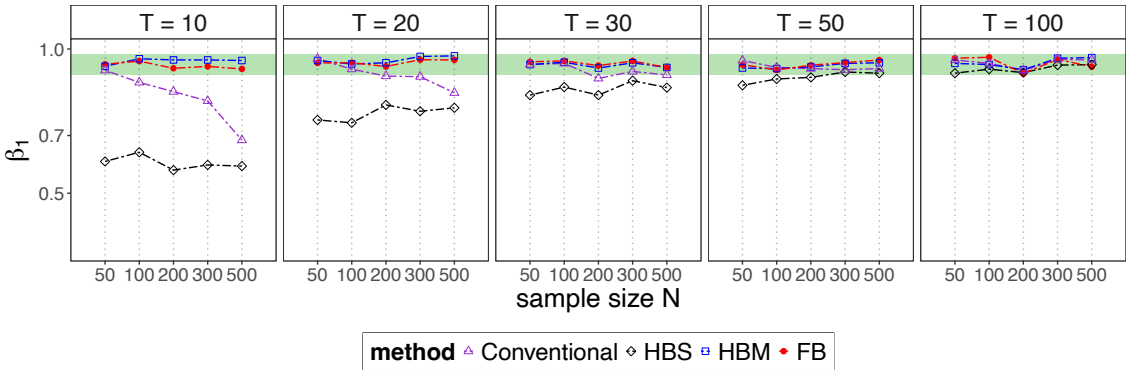
Relative bias results of β_1 *from conditions with* $\beta_2 = 0, \beta_3 = 0$



Note. The green dashed lines mark the range of $[-.1, .1]$ for ignorable relative biases.

Figure S42

Coverage rates results of β_1 *from conditions with* $\beta_2 = 0, \beta_3 = 0$



Note. The green dashed lines mark the range of $[.91, .98]$ for satisfactory 95% CI coverage rates.

Figure S43

Empirical bias results of β_2, β_3 *from conditions with* $\beta_2 = 0, \beta_3 = 0$

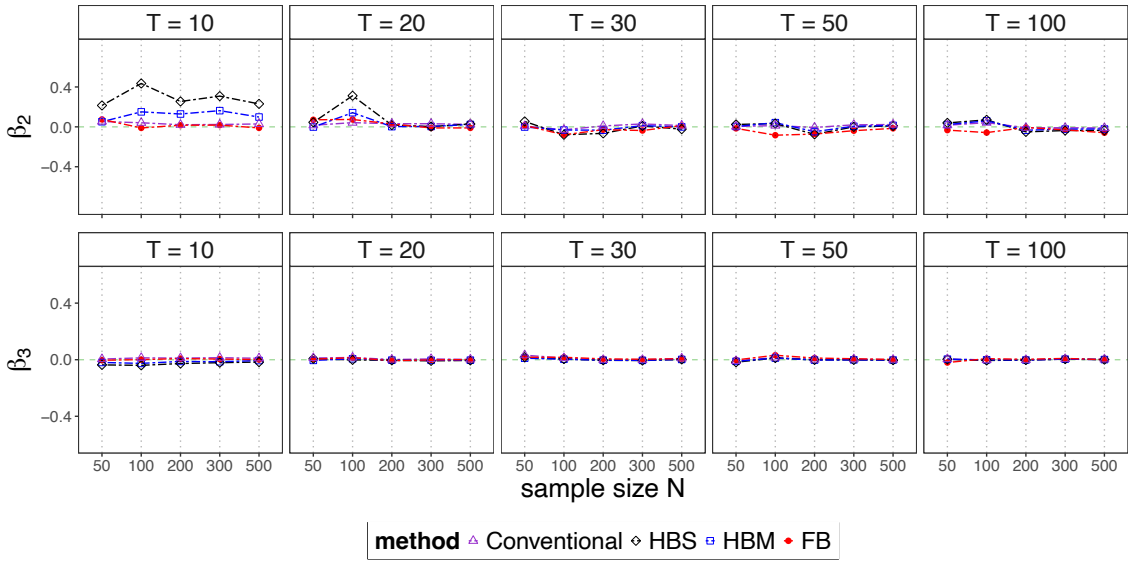
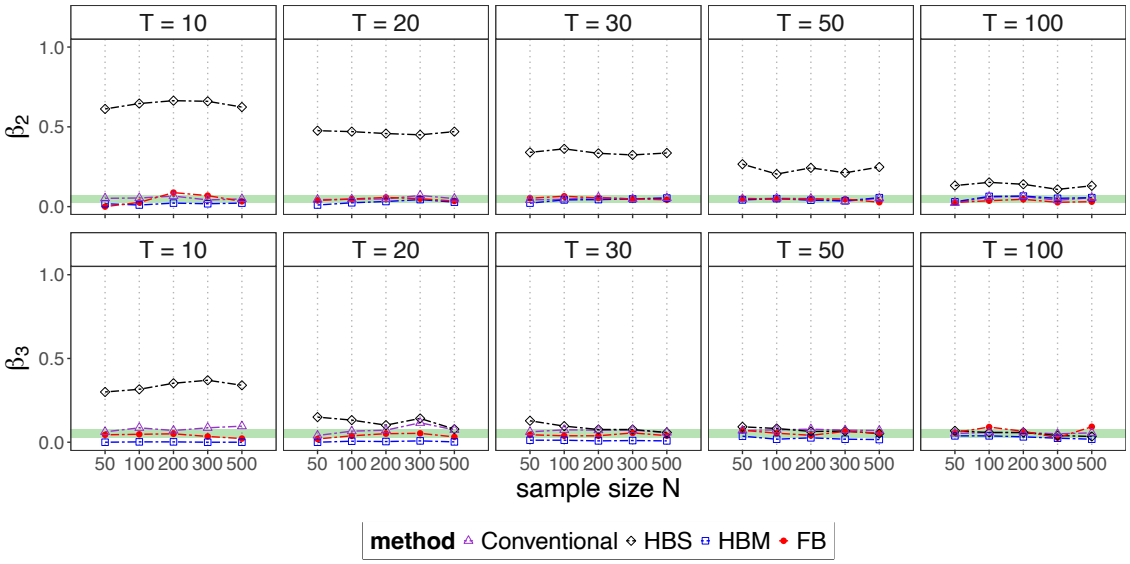


Figure S44

Type I error rate results of β_2, β_3 from conditions with $\beta_2 = 0, \beta_3 = 0$



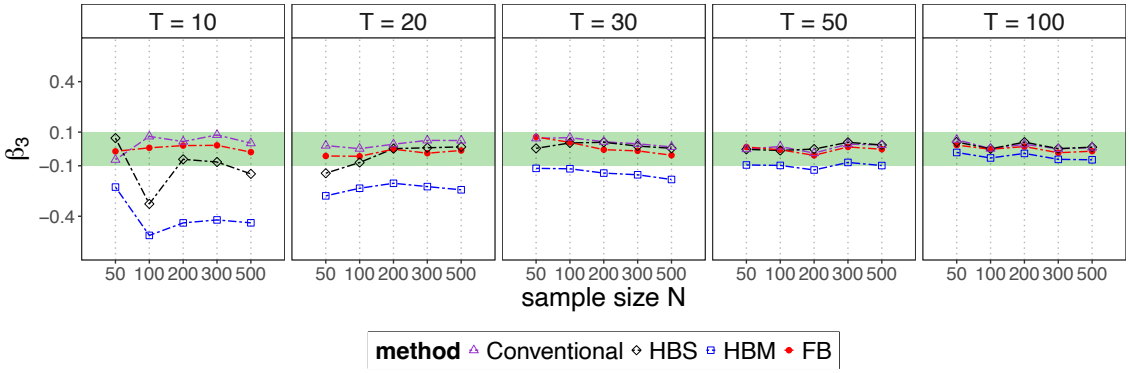
Note. The green dashed lines mark the range of $[.025, .075]$ for well-controlled Type I error rates.

2.6 $\beta_1 = 0, \beta_2 = 0$

True values: $\beta_1 = 0$, $\beta_2 = 0$, $\beta_3 = .14$

Figure S45

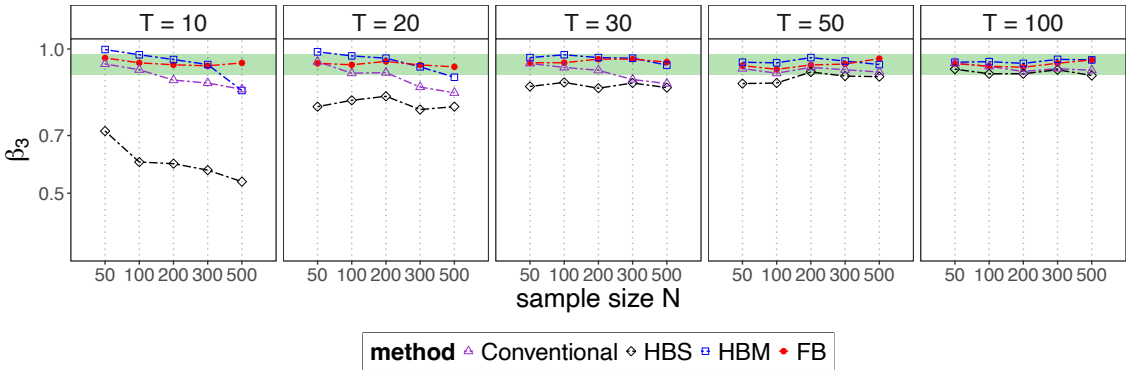
Relative bias results of β_3 from conditions with $\beta_1 = 0, \beta_2 = 0$



Note. The green dashed lines mark the range of $[-.1, .1]$ for ignorable relative biases.

Figure S46

Coverage rates results of β_3 from conditions with $\beta_1 = 0, \beta_2 = 0$



Note. The green dashed lines mark the range of $[.91, .98]$ for satisfactory 95% CI coverage rates.

Figure S47

Empirical bias results of β_1, β_2 *from conditions with* $\beta_1 = 0, \beta_2 = 0$

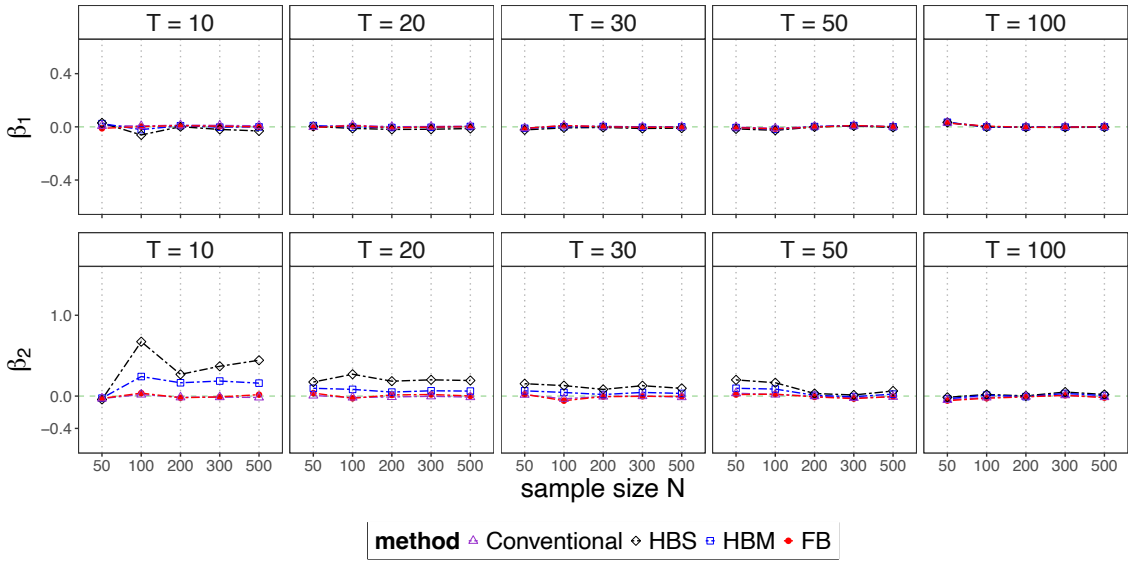
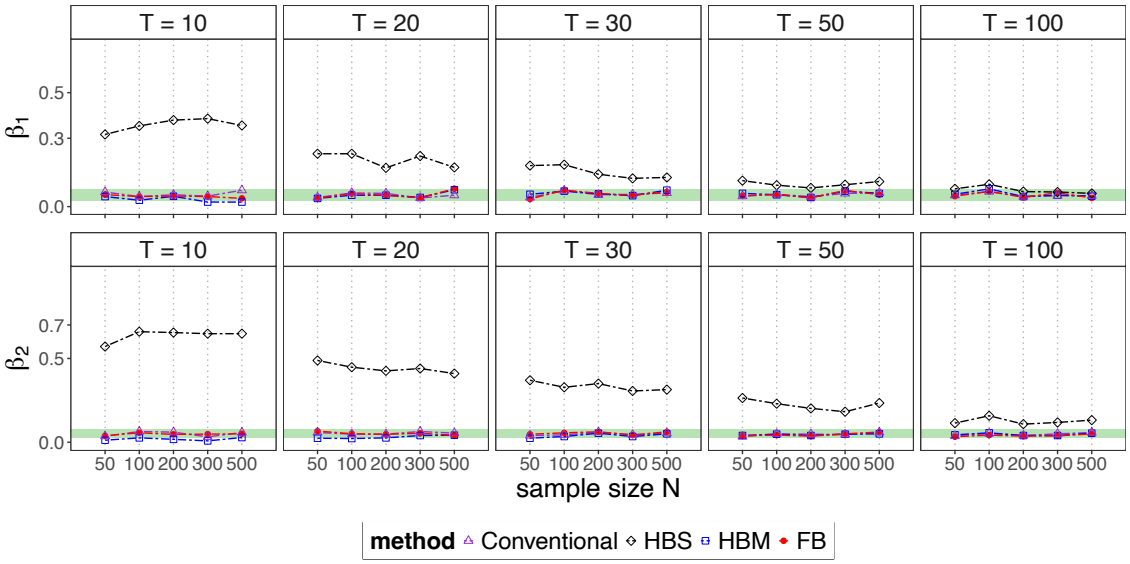


Figure S48

Type I error rate results of β_1, β_2 from conditions with $\beta_1 = 0, \beta_2 = 0$



Note. The green dashed lines mark the range of $[.025, .075]$ for well-controlled Type I error rates.